Wilson Ornithological Club

AVICULTURAL MAGAZINE

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Blue Eared Pheasants.

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AVICULTURAL MAGAZINE

THE JOURNAL OF THE AVICULTURAL SOCIETY
AND THE AVICULTURAL SOCIETY OF AMERICA

Vol. 64.—No. 1.—*All rights reserved.* JANUARY–FEBRUARY, 1958

THE BLUE EARED PHEASANT

(*Crossoptilon auritum*)

By J. DELACOUR (Los Angeles, California, U.S.A.)

The three species of Eared Pheasants, the Brown, the Blue, and the White (some sub-species of which have a great deal of bluish-grey), range through the high plateaus and the slopes of the mountains of northern China, Mongolia, and Tibet. Alone among pheasants, the males and the females are exactly alike in shape and in colour, the former being distinguished from their mates by a spur on the leg and a slightly differently shaped velvety red patch on the face. The Tibetan species, *C. crossoptilon*, has at least five sub-species, varying from almost pure white to dark grey ; but all differ from the other two more northern species in having the ear-tufts short, hardly noticeable as they do not stand over the top of the nape, and a much flatter, thicker tail. They are also decidedly larger.

The Brown Eared Pheasant (*C. mantchuricum*) was long the only one known in captivity. It arrived in Paris in 1864 and has been reared in great numbers in France since 1866. The first importation consisted of one male and two females and two more males reached London in 1866. These five birds are the ancestors of the whole captive population of the species as none has ever left China since. They are perhaps extinct to-day in the wild state. For a long time common in pheasantries they have become more difficult to rear during the last twenty years, many birds proving infertile. But quite a few have been raised lately in North America and in Europe, so that, with care, it will probably be possible to save this very fine species from extinction.

The White Eared Pheasant came to America in small numbers in 1935. They never bred very freely, but a small stock has been maintained ever since.

The Blue Eared Pheasant is now the most abundant in captivity. It is perhaps also the most beautiful of all, both in colour and more

particularly in shape, as its tail is highly ornamental, having all the webs of the central feathers entirely separated and distinct, lace-like in effect. It lives on the mountains of north-western China and neighbouring countries : northern Kokonor, Kansu, and the Ala Shan Range. It is found far in the interior and this explains why it had never been sent out alive before 1929, when Mr. A. Hampe, then a resident of Shanghai, whom I had commissioned for that purpose, sent to Clères some thirty birds which he had managed to collect with great effort and difficulties. Some were reared during the following years and more were sent to Germany and to the United States in 1932. Now the species is well established throughout the world and breeds successfully in many zoos and game farms. It is one of the finest acquisitions of aviculture in recent times.

* * *

EXCHANGE AND MART SCHEME

To enlarge on the preliminary note which appeared in the November-December issue of the Magazine, the object of the Exchange and Mart scheme is to provide a channel through which members can, with as little delay and fuss as possible, exchange, buy, or sell their surplus birds, primarily with a view to making up breeding pairs, and thus bringing about an improvement in the breeding stock of foreign birds.

It is not envisaged that the scheme should provide a market for the disposal of birds in which the member has lost interest, but to bring together specimens of the rarer species which are not in the usual way available, or easily obtainable, from the dealers.

The scheme does not apply to British birds, nor to the commoner foreign birds. It is available to all members of the Society and will run from January to January in each year. The subscription is 5*s*. per annum.

Members are entitled to send, as often as they think necessary, a list of birds wanted and for disposal. If at all possible the member will then be put in touch with others who either want the birds offered or have for disposal birds which are required.

A few members have already availed themselves of the facilities, and there are on offer many interesting species, but to make the scheme absolutely worth-while, many new members must be enrolled. The scheme, if it receives the co-operation of the members, should prove most beneficial and will satisfy a long-felt want which cannot be satisfied by any other means. Please therefore do your utmost to make the scheme a success.

The Society will not enter into any negotiations with regard to the birds—the members will be left to make such arrangements

between themselves as they think fit. It will assist if, as soon as an amicable arrangement has been arrived at, the parties thereto will notify the Scheme Secretary, Mr. Claude N. Payne, in order that the birds shall not be offered to other members.

It is emphasized that the scheme does not do away with the ordinary advertisements.

Any surplus money at the end of each year will be put to the Colour Plate Fund.

* * *

ON THE DISPLAY OF THE SIX-PLUMED BIRD OF PARADISE, *PAROTIA SEFILATA* (PENNANT)

By STEN BERGMAN (Rönninge per Stockholm, Sweden)

(Reprinted by kind permission from *Nova Guinea*, new ser., vol. 8, Part 1, July, 1957)

It is not only the magnificent colouring and wonderful adornments of the Birds of Paradise that arouse our admiration. The displays of the different species are so varied and so curious that it is sometimes difficult to believe one's eyes on seeing them for the first time.

One of the most remarkable displays of any bird of this family is the dance performed by the male Six-plumed Bird of Paradise *Parotia sefilata* (Pennant). This bird lives only in the western parts of Dutch New Guinea, where it occurs in the Tamrau, the Arfak, and the Wandammen Mountains. According to Mayr (*List of New Guinea Birds*, New York, 1941, p. 172), it lives at an elevation of between 1,200 and 1,800 m., which accords well with my own experience.

I have often observed this bird between 1,200 and 1,600 metres in the Arfak Mountains, especially whilst camping for three weeks not far from a place known as Bivouac October. There I also found several display grounds, and I spent many hours in small hides of leafy branches, which I had arranged a few metres from the display clearings. These were always situated on the ground in dense forest and were usually overshadowed by large trees.

The dancing-places were generally less than one square metre in diameter and of indefinite shape. Sometimes they were more square, sometimes more oblong. But one absolutely essential condition for the choice of such a place was that there should be one or two horizontal branches growing at a suitable height over the area. At the place where I spent most of the time, these branches were approximately 60 cm. from the ground.

It is the habit of *Parotia sefilata* to give his dancing-place a daily clean up. Every leaf or twig which falls down is thrown outside as

soon as it is observed by the bird. All vegetation is removed so that *Parotia* has an earth floor to dance on.

When, under cover of darkness, I entered one of my hides, which was placed at a distance of four metres from the display ground, I first took a handful of leaves and threw them over the dance floor.

At 6.30 a.m., half an hour after daybreak, I heard a harsh cry, very similar to that of the European Jay (*Garrulus glandarius* L.). It was *Parotia* announcing its arrival. It was sitting in a tree about 20 m. away from me, to judge by the sound. From this position its cry was repeated again and again, until suddenly I heard the beat of wings immediately outside the hide. As I looked out through one of my peep-holes I saw the velvet-black Bird of Paradise alight on one of the horizontal branches above the display ground.

It caught sight of all the leaves that I had strewn about and instantly flew down and began to remove them. It picked up the leaves, one at a time, in its beak and flung them towards the outer edge of the dancing-place. It then hopped nearer to the edge and with great energy threw the leaves outside the clearing, where there already lay a mass of dry leaves, twigs, and other rubbish.

The silver-white triangle on its forehead shone very vividly in the dim light, and the six long wires on its head swayed with every movement. Even the metallic sheen of the breastplate glistened now and again. Not until the last leaf had been removed and the dancing-place was as smooth and neat as before, was it satisfied and flew away. I did not see any dance that time. The Papuans said that " korangan ", as they call the bird, usually dances in the morning and in the afternoon. The same display times apply to most Birds of Paradise.

Some days later, it was 8th August, I went to the place at 2.30 in the afternoon. I took a Papuan with me merely for the purpose of sending him home again as soon as I had entered the hide, in case there might be any Bird of Paradise in the vicinity, who might observe me going in. Before creeping into the hide, I again strewed a handful of leaves over the display ground.

After I had waited ten minutes a young male, or a female—as they have the same brown-striped plumage—arrived and flew down to the dancing-place. It hopped about for a few minutes but did not attempt to clear away any leaves, and then flew up on to a branch barely two metres away from me. After that it flew off and disappeared into the forest.

Suddenly, at about 4 o'clock, a male bird flew down to the display ground and began to clear away the leaves that I had thrown there. When he had done this for a few minutes, he shook his feathers, flew on to one of the branches above the ground and uttered his harsh cry twice. He then flew down again and continued to pick up the leaves.

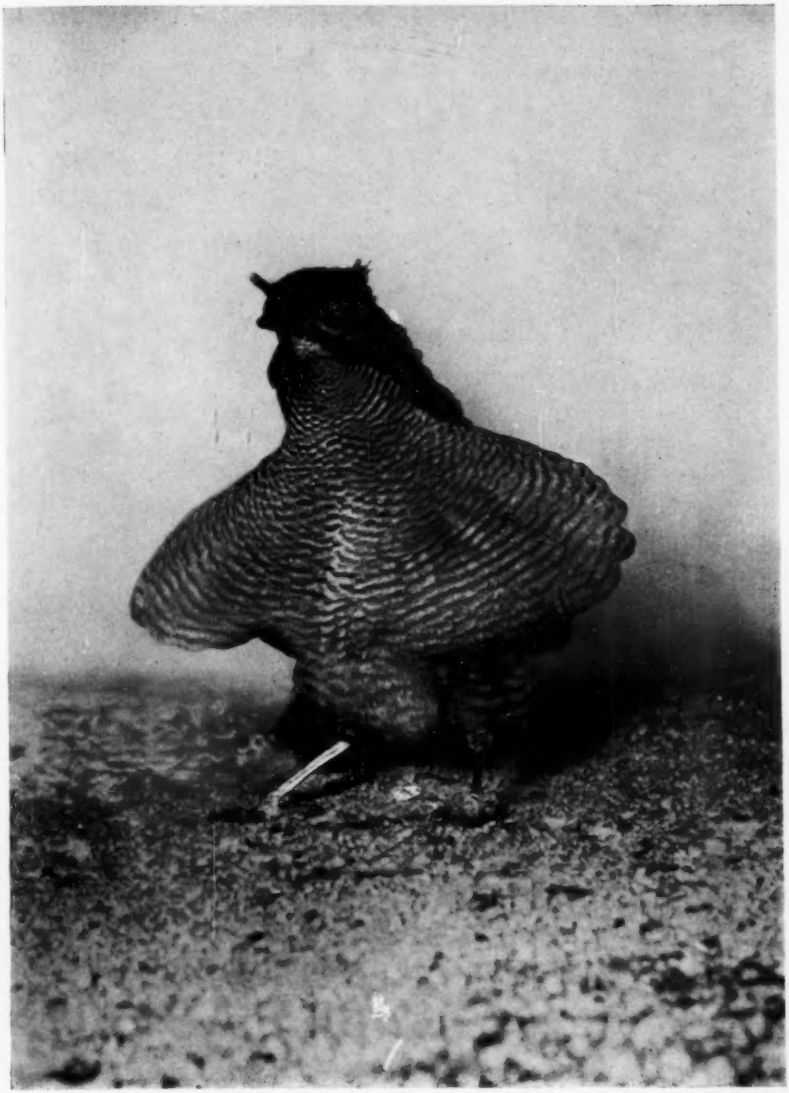

Photo Sten Bergman

Young male of the Six-plumed Bird of Paradise during the dance.

Photo Sten Bergman

First position introducing the skirt-dance.

Second position before the dance.

Photographs Sten Bergman

Third position. The skirt-plumes are being spread out.

Photo Sten Bergman

With the dance-skirt encircling the body, the Six-plumed Bird of Paradise has started the dance.

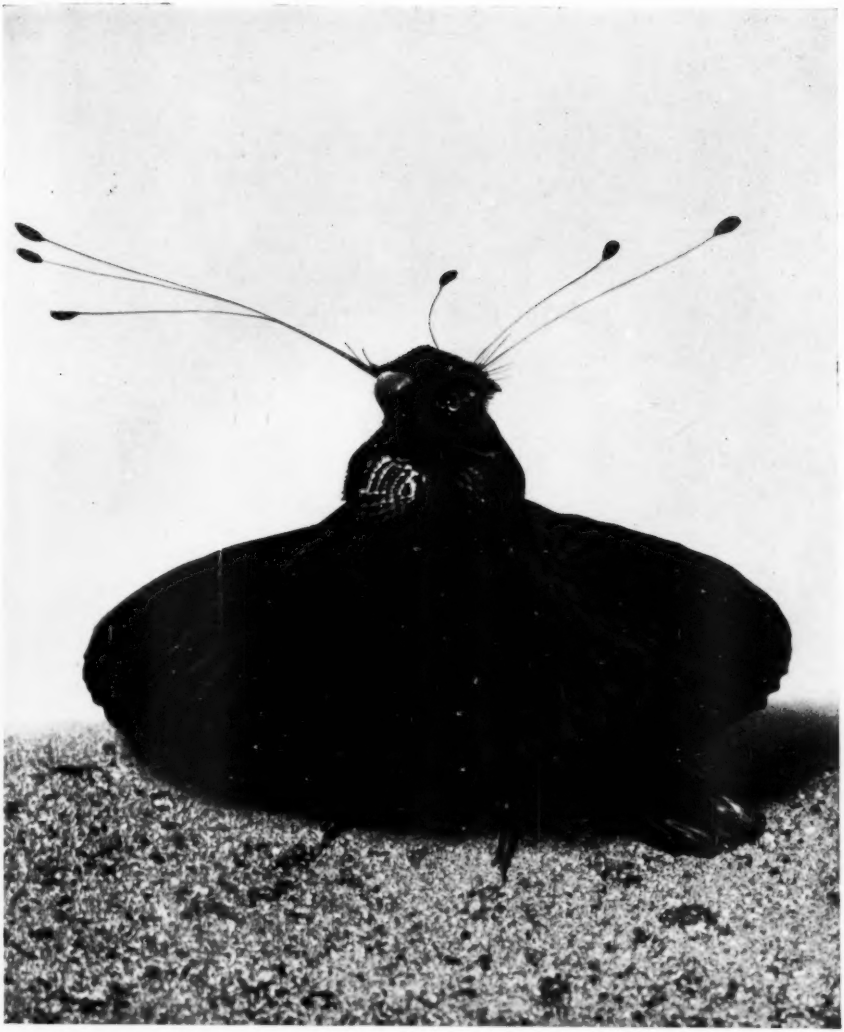

Photo Sten Bergman

After a moment's pause, the Six-plumed Bird of Paradise lowers its skirt and continues.

Photo Sten Bergman

First position of the Six-plumed Bird of Paradise when preparing to dance on a branch.

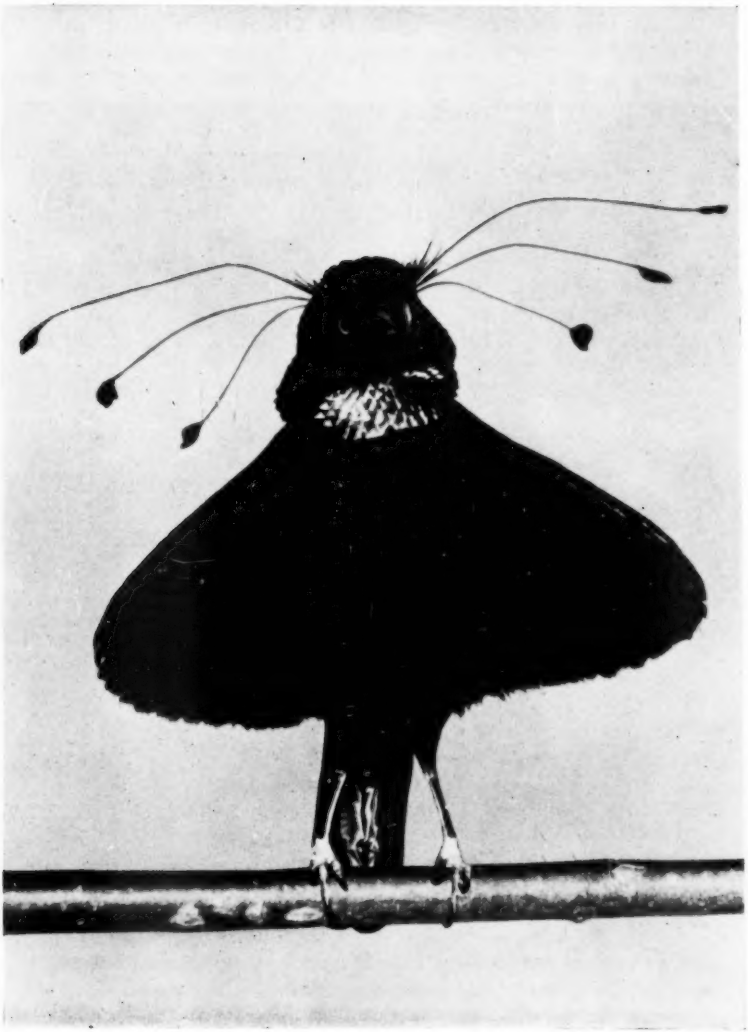

Photo Sten Bergman

The Six-plumed Bird of Paradise dancing on a branch.

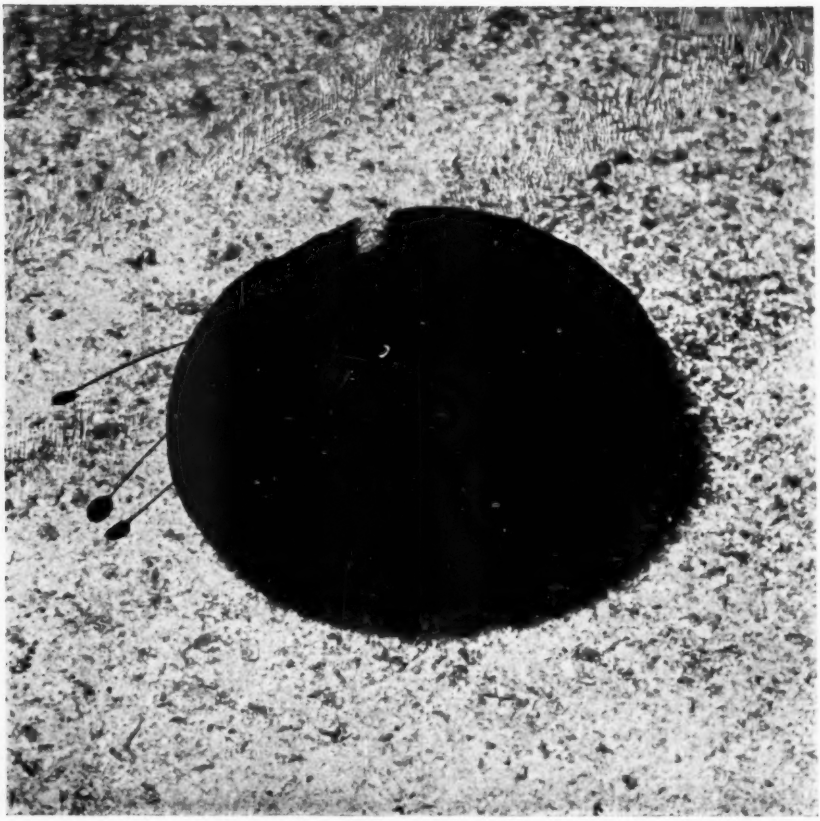

Photo Sten Bergman

Dancing attitude of the Six-plumed Bird of Paradise as seen from above. The gap in the skirt was closed immediately after the photograph was taken.

After a while he again shook his feathers and then stood motionless for a moment. He appeared to stiffen, stretched his head upwards and extended his neck. Then the lower part of his body broadened increasingly as he expanded the long, ornamental plumes growing from the sides of the body. The three long wires on either side of the head were swept out to the sides and then forwards and downwards. The feathers of the silver-white triangle on the forehead were erected and curved forward towards the beak. All round his body the long, velvet-black, ornamental plumes were formed like a ballet skirt, completely circular and entirely covering the wings, which were underneath the skirt.

The head was thrust forwards and downwards and was then swayed from right to left with continuous rapid movements. This made the small flags of the wires swing about all the time at a fast tempo. The sight of the bird with its curious velvet-black dancing skirt standing out almost horizontally from the body, and the extraordinary motion of the head was so astonishing that I watched the performance with breathless excitement.

Thereafter, like a prima ballerina on the stage of an opera house, the bird began to dance from right to left and in semicircles. The similarity to the dance of a human being was so amazing that I sat spellbound.

Suddenly the bird stopped, lowered its dancing skirt and resumed its normal appearance. After this it flew up on to a branch, uttered its cry twice and then returned to the ground and continued to remove all the remaining leaves. Thereafter it left the place, but remained for some time in the vicinity, where its cry could be heard occasionally.

It was fairly chilly in the afternoon at this place, which was situated at approximately 1,500 metres. When I left it at 5 p.m., my thermometer registered 16 degrees Centigrade.

At the various display grounds where I have made observations, I never saw more than one male in full plumage. On the other hand, I have sometimes seen a brown specimen, i.e. a female or a young male. On each occasion, when I kept to my hide, *Parotia*'s harsh cry, uttered at fairly short intervals, was heard now and then in the vicinity.

I got the impression that each display ground was owned by one male in full plumage, who kept a more or less continuous watch on the place all day, exactly in the same manner as *Diphyllodes respublica* (Bonaparte) on the islands of Waigeu and Batana. The male of this species of Bird of Paradise has a similar display ground and he has precisely the same habit of removing all leaves and refuse which fall on the clearing.

With permission from the Dutch authorities I have brought some

live specimens of *Parotia sefilata* to Sweden for the purpose of continuing my studies and observations of these birds. The photographs illustrating this article are all taken in my home at Rönninge, 30 kilometres from Stockholm.

All my specimens of *Parotia* are, unfortunately, males, as I did not succeed in getting hold of a single female, which of almost all Birds of Paradise are extremely difficult to catch. Although the Papuans who caught my *Parotia* insisted that the brown specimens were females, it soon became apparent that they were young males. The plumage of females and young males of many species of Birds of Paradise is almost identical and extremely difficult and sometimes even impossible to distinguish.

The chief reason why females are so difficult to catch is probably the fact that they do not regularly visit the display grounds or display trees. The males, on the contrary, visit them every day but the females only occasionally or perhaps only when they want to get mated.

All my specimens of *Parotia* have danced, the young males in their brown plumage as well as the older males in their full black plumage. They have danced all through the year, except during the moulting season, which lasts for approximately four months. In Sweden, the *Parotia*'s moult takes place, as a rule, during the summer, but it may start at any date between March and June, or even later, and continue until well into the autumn, or in exceptional cases it may begin at the end of the summer.

My Six-plumed Birds of Paradise dance mostly in the morning and in the afternoon, as they do in their native country. During the whole year the birds have electric lighting for 12 hours per day, from 8 a.m. to 8 p.m., since in New Guinea they are accustomed to 12 hours of daylight and 12 hours of darkness.

As already mentioned, the young males in their brown plumage dance also, and some of my brown males have, month after month, danced more zealously than the black males, and in certain cases with greater variation in the dance.

When I had my Six-plumed Birds of Paradise in Sorong for two months before leaving New Guinea, two young males danced every day. One of them, in particular, was tireless and could dance more than fifty times a day. But the young males have not a dancing-skirt which envelops the body like the black ones, only the front is covered. As they have no wires on their heads and have neither the gleaming breastplate nor the silver-white triangle on the foreheads, their dance is not so impressive. Otherwise the choreography is the same, except that my young males were more inclined to wander about the floor during the dance, and executed a number of leaps straight up into the air, which I have not observed among the black ones (Plate I).

When one of my *Parotia* feels a desire to dance, it nearly always

begins by hopping on the lowest perch and flicking its wings, at the same time rapidly spreading and contracting its tail feathers. It may continue like this for a long or short period, and will then hop down on to the ground again. It then adopts a curious attitude. It points its head and beak obliquely upwards, stretches its body in the same direction and stands motionless, as though transfixed, for some seconds (Plate II). It then quickly changes its position so that its head is pointed towards the ground and its tail pointed upwards (Plate III, upper picture).

This position is retained for only a few seconds, after which the bird slowly raises its head, lowers its tail and begins to spread out the plumes of its dance skirt so that the skirt becomes absolutely circular. The tail is bent sideways to prevent its getting in the way during the dance (Plate III, lower picture).

Then it begins to dance, moving from side to side and in semi-circles, swaying its head continuously from right to left so that all six wires, with their small flags at the ends, quiver (Plate IV). Provided no other bird comes to disturb the dancer, it will pause for a moment in its dance after a little while, bend its legs, lower its dancing-skirt and begin to sway its head still more laterally and still faster than during the usual dance (Plate V).

From this second dance pose it may sometimes pass on to a third, in which, with outspread skirt, it hops between two points at a couple of decimetres distance from each other. It may then revert to dancing in the usual manner. When the dance is finished, the bird nearly always utters its harsh cry.

As a rule it will then fly up on to the lowest perch and hop nervously, flicking its wings and expanding and contracting its tail feathers. It then flies to the ground again, hops about on one spot with upstretched body, ruffles its plumage, preens itself for a moment, returns to its position with body stretched upwards and beak pointed obliquely upwards until it suddenly lowers its head towards the ground and stands motionless for some seconds, then raises its head and its whole body, spreads out its skirt, and begins to dance again.

Sometimes, however, it begins the dance in quite a different way. It will suddenly stand on the ground, with legs wide apart, and, without more ado, raise its dancing-skirt, sweep its wires outwards and forwards and begin to dance. When starting in this way, the dance will usually be short and not so elaborate as when it starts in the normal way.

Should any other *Parotia* in the same room fly on to the lowest perch or down to the ground while another bird is dancing, the whole dance is changed. The dancer will then turn his head and his dancing-skirt in the other bird's direction, and whenever the latter makes the slightest move the dancer readjusts his position so that he always

faces the other bird. If the newcomer sits quite still, the dancer will stand rooted to the spot, with outspread skirt and head swaying to and fro.

Even if there are several Six-plumed Birds of Paradise in the same room, it is very seldom that two will dance at the same time. They always prefer to dance solo. While one dances the others sit and watch. When the dancer has finished his performance, one of the onlookers will often fly down and dance. In this way they take it in turns to dance solo. Only on very rare occasions has it happened that two birds have danced together for a few moments.

At present I have six *Parotia* in a room which is divided into two sections by wire netting, four birds in one section, and two in the other. If one of the birds in each section wants to dance at the same time and both begin to dance for a moment, they often get furiously angry with each other and they both fly at the netting and try to peck at each other.

If two birds in the same section fly down and prepare to dance, they also get very annoyed with each other and both try to chase the other off or start a fight. This is probably explained by the fact that, as already mentioned, each male Six-plumed Bird of Paradise very likely has its own dancing-place in the forest, where no other male is allowed to dance and thereby attract a female. If two of my males dance in the same section or in adjoining sections, they feel themselves to be rivals and each wants to chase away the other.

Occasionally, also, *Parotia* dances on a branch. In such case the bird begins by taking up a similar attitude on the branch to that adopted before the dance on the ground. Thus, after some hop along the branch, it suddenly stands motionless with its body stretched in an almost vertical position and its beak pointed obliquely upwards (Plate VI). Thereafter with a quick movement it turns its body horizontally, then rises, spreads its skirt, and takes up the dance position shown in Plate VII. Of course, when it dances on a branch it can only move along the branch. It usually remains in the same place on the branch, but it always sways its head in the same manner as when it dances on the ground.

Stresemann describes a type of dance performed by a male *Parotia sefilata* in the London Zoo, and illustrates it by a drawing (*Orn. Monatsberichte*, 39, 1931, pp. 4–6). In this type of dance only the front of the bird is covered by the long plumes which normally form the circular dancing-skirt. In my opinion this type of dance, performed by a male in full dress, is probably an exception, as I never have seen it in my seven years' experience of keeping live *Parotia*.

* * *

The Editor acknowledges with many thanks the loan of the blocks of the illustrations of this article by E. J. Brill, Leiden, publishers of NOVA GUINEA.

BIRD PSYCHOLOGY AND AVICULTURE

By P. M. A. HARWOOD, M.R.C.V.S. (Darlington, Western Australia)

Some wonderful work has been done by modern ornithologists in working out the whys and wherefores of bird behaviour. Unfortunately the results of a major part of this work are of little value to aviculturists, partly because of the rather profuse use of technical terms which make many reports barely intelligible to the average lay person, and partly because very little is written dealing with the effects of captivity on behaviour. In this article the author attempts to set out his facts in simple terms, and a series of typical "case histories" are given as examples throughout. Because the use of some scientific terms is unavoidable a glossary is included, and as everything is reputed to be upside down in Australia, this comes at the beginning instead of the end.

GLOSSARY

Behaviour. The normal reactions of a normal bird to its normal circumstances of life.

Compensation. The adaption by a bird to abnormal or unusual circumstances.

Equilibrium. A state of balance between cause and effect.

Psychological. Refers to the functions of the mind, i.e. perception, sensation, memory, thought, etc., and more broadly to the behaviour of the organism in relation to its environment.

Psychosis. An illness of mental origin.

Psycho-somatic. An effect on the physical part of the body, induced by an effect of mental origin.

Stimulus. An outside agent or effect producing an exciting or irritating effect on the organism.

Sublimation. The conversion of an instinctive reaction into some other usually less violent response.

Trauma. An injury.

In considering the psychological effects that captivity has on a bird, I shall only deal with those species which have yet to become truly domesticated. Progressive generations of aviary breeding result in a gradual loss of the instinctive reactions upon which a wild bird depends to survive. As an example take the domestic duck which is descended from Mallard stock, but which has virtually lost its powers of flight.

Before getting down to cases, I would like first, to make a generalization. The more intelligent the bird is, the more serious are the psychological effects of captivity. Only the highly intelligent species will develop psychoses as a result of confinement.

Secondly, I must stress the importance of avoiding falling into the

trap of confusing physical effects with psychological effects. One often hears of birds "pining away" in captivity, implying that loss of freedom or the loss of a mate sets up a condition where the bird refuses to eat due to a "deep melancholy". In actual fact, the survival instinct is so strong in virtually all birds that the so-called pining almost invariably results from unsuitable feeding, unsuitable housing, disease, or a combination of all three.

Example.

Some birds have the reputation of refusing food in captivity. These species are usually specialized feeders, and do not recognize the substitute foods offered. By the time they are willing to try a substitute, irreparable damage from starvation has already occurred. Forcible feeding with the substitute until it is voluntarily accepted is usually successful.

The Effects of Restricted Movement

(1) *The Loss of Escape Routes.*

Almost all birds have an instinctive fear of man, predatory mammals, hawks, and snakes. Survival depends on these fears and the quickness of the reactions to them. In its wild state, a bird is constantly reacting to the presence of its hereditary enemies. Survival depends on an immediate and maximal reaction to each stimulus. Thus a bird is constantly on the look-out for enemies and almost always has a preconceived plan of escape for any emergency that may arise. In the case of man or animals, this usually means flying upwards and away; in the case of hawks—into cover and freezing.

Living as it does constantly on its guard against enemies, a bird is well compensated psychologically. Fear is a normal reaction, and once the cause is removed it is completely forgotten. Anxiety neurosis as a result of living in a state of insecurity is unknown in birds; or to put it more simply, birds don't get ulcers.

When a bird is caged, it is automatically deprived of choice of escape routes. This may result in the psychologically abnormal behaviour of panicking. The cause is because when suddenly confronted with an enemy, no satisfactory escape route (i.e. insufficient height or insufficient distance) is available. The effect is that the bird, with its normal escape instincts blocked loses its equilibrium between cause and result and flies about wildly and uncontrolledly, often headlong into the wire netting. From the point of view of the aviculturist, panicking is very undesirable, but the dangers are physical, not mental. Fatal injuries often result during panic, and prolonged panic may result in complete exhaustion, even fainting. But provided physical injuries are avoided, once the cause is removed and equilibrium is

restored, panic has no more permanent mental effects on a bird than a normal fear reaction.

The wise aviculturist knows how to combat the effects of panic, and it won't hurt to run over the main points here.

It is well known that birds soon come to tolerate human presence when kept in small cages. This is because every escape route is blocked by the nearness of the bars. The flying escape reaction soon becomes sublimated, and when approached the bird merely runs up and down the perch or hops from perch to perch. It will stop fluttering when closely approached long before it loses its fear of man and approaches him voluntarily.

Less well recognized are the effects of large, high aviaries and well-planted garden aviaries. Here acceptable escape routes are provided in terms of height, distance, or cover. Birds in such aviaries allow closer approach than in small bare aviaries, and a much stronger stimulus is required to start panicking. Where cost or other factors preclude from building aviaries 8 feet or more high, a lot of panicking can be avoided by providing an overhang behind which the birds can hide. This will soon be accepted as an alternative escape route, and the birds will be much steadier as a result.

In conclusion of this section, it must be stressed that birds which have become thoroughly accustomed to, and lost all fear of, man, will still panic when confronted with any powerful unusual stimulus.

Examples.

(*a*) The tame cockatoo which meets any human contact with the most unruffled aplomb, but panics wildly when suddenly confronted with a strange dog.

(*b*) The wildly unsteady Broadtail Parrakeet which one day beats you through the aviary door and escapes. From the pace it was going you expected it to be in the next county before pulling up, but later in the day you see it sitting on a branch above your head, studying you with nonchalant interest.

(*c*) The highly-prized Turquoisine cock which almost eats out of your hand, and breaks its neck on the wire netting when a hawk flies over.

(2) *The Loss of Flying Space.*

Caging a bird has the effect of reducing or eliminating the amount of flying exercise it can take. In considering the psychological effects of caging a bird it is important to avoid confusing physical deterioration due to lack of exercise, with mental damage, due to the inability of the bird to give expression to its innate motor drives. Here again, intelligence is what counts. Only some of the highest mentally developed species possess the desire to fly for the sake of flying, in the way a frisky horse gallops round his paddock, just for the sake of movement.

I would say that any aviary large enough to allow its inmates unrestricted flight allows them also to relieve their innate motor drives. Psychological effects are only seen where highly intelligent and active birds are kept in cages. Small finches, canaries, etc., suffer little mental damage from caging, but cockatoos and parrots suffer greatly and can actually contract mental illnesses as a result of being unable to fly.

In its mildest form, this type of mental upset makes the bird unable to fly downwards. Progressively the bird becomes more reluctant to fly at all, until it is psychologically incapable of making the decision to take off when at liberty. More serious manifestations of mental upset seen in caged parrots are: (*a*) weaving, bobbing, and screaming; (*b*) feather plucking; (*c*) self-mutilation.

None of these vices is seen in birds which have never been confined in small cages, but most of them tend to persist even after the bird is given greater freedom.

Examples.

(*a*) An African Grey Parrot is crawling about on top of his cage when he is suddenly startled and flies to the top of a tree. He spends the rest of the day sitting there and screeching. Towards dusk he takes off, but instead of flying down again, he disappears into the distance, getting higher and higher.

(*b*) A Sulphur-crested Cockatoo who has long since plucked all the feathers out of his breast, takes to chewing his foot, eventually biting it off.

The Effects of Unrestricted Access to Food and Water and Changed Feeding Habits

In the wild state, birds spend a considerable amount of time collecting food. Each seed or insect is sought out separately. In addition, wild birds, particularly finches, may travel considerable distances daily to water.

In captivity, food and water are usually available at all times, and the searching element is lost, particularly where in the interests of hygiene birds are fed from dishes. Birds very rapidly lose the urge to seek for food when it is readily available, even in the wild, so it is reasonable to assume that there are no psychological ill-effects from removing the necessity to search for food. Any surplus energy resulting from the shortened feeding period can be used up in an aviary of reasonable size, although in very small cages it is likely that restricted feeding time contributes to the psychotic disturbances seen in parrots.

Physical ill-effects from unlimited food supply often occur in the insectivorous species which are very liable to overeat in captivity.

More important to consider are the effects of change in feeding

habits. Some birds always feed at ground level, others at tree level, yet others take their food on the wing. In every case a bird has to adjust its feeding habits in captivity. In some cases, the instinctive aversion to feeding on the ground or in an open space, or the lack of instinct to search for food except at ground level may result in starvation unless the aviculturist makes the necessary adjustment. In all cases it is a wise precaution against the development of abnormal behaviour to feed ground-feeding species at, or near, floor level, and tree-feeding species some distance from the ground.

Example.

It is virtually impossible to break either hand-reared or wild-caught White-tailed Black Cockatoos on to seed by offering food at floor level. The difficulties encountered in getting this species to take seed is greatly reduced when it is offered at some distance above the floor.

The Effects of Confinement on Breeding Behaviour

As in all aspects of bird psychology, the intelligence quotient bears a direct ratio to the amount of abnormal breeding behaviour seen in aviaries.

(1) *Choice of Mate.*

In the wild state, the selection of a mate is a matter of considerable importance, and often takes place before puberty. One wonders when one hears of this or that species which has been incited to commit murder of an offending mate in an aviary how the observer would react should he, by the whim of some Martian scientist intent on studying the human race, become confined in a restricted space for an indefinite period with an unattractive member of the opposite sex.

In fact, the remarkable thing about breeding psittacines by the process of confining a male and female, usually adult, in the same aviary is not the number of failures, but the number of successes. Finches are far less discriminating in the selection of a breeding partner, and it is also far more common for a choice of mates to be available.

Incompatible marriages are not at all uncommon in birds of the parrot family, and account for a high percentage of breeding failures. The value of a proven breeding pair is well known to all aviculturists, and it is a well known fact that some pairs will produce progeny under conditions of incredible adversity. Where there is a complete harmony between the members of a pair, in fact where a true mating can be said to have taken place, the entire reproductive cycle will be adapted to the circumstances of aviary life, and provided a serious attempt is made to study the needs of the parents breeding success will follow. I feel quite certain that where a particular pair of birds has earned a reputation for being prolific, a major part of their success is due to matrimonial bliss.

There are many ways in which an unsatisfactory mating results in abnormal breeding behaviour. A list of those most often seen is given.

(*a*) Abnormal aggression by one member of the pair towards the other.

(*b*) A complete disinterest of the male in the female, which may graduate into the stage where courtship displays are absent or rudimentary and pairing does not occur.

(*c*) An abnormal fear of the female by the male, so that while he may give normal courtship displays and feed the female, he does not attempt to pair with her.

(*d*) Although normal pairing occurs, the male shows little or no interest in feeding the female or progeny.

(*e*) The male actually interferes with the eggs or young.

(*f*) The female mutilates or plucks the young in the nest.

Examples.

(1) A female Indian Ring-neck attacks and kills the male.

(2) A pair of Barraband's Parrakeets fail to show the slightest interest either in each other or in the nest-box, despite both being in perfect condition.

(2) *Selection of the Nest Site.*

In the wild state, psittacine birds start investigating potential nesting sites long before the onset of the actual breeding season. During this phase of reproductive activity hundreds of sites, varying from the possible to the wildly improbable, are inspected before a final selection is made. There is no doubt at all that a thoroughly satisfactory nest site is a powerful stimulus to further breeding activity.

Under aviary conditions, the nest sites made available often lack the height and depth of those that would otherwise be selected. Unattractive nest sites frequently result in birds laying their eggs on the ground or other unsuitable sites, with subsequent failure. In addition, the risk of desertion of eggs or young is greatly enhanced when the nest site does not give the birds the sense of security they require. In general the main points to consider are :—

(*a*) Adequate height from the ground.

(*b*) An attractive opening facing away from the sun but not in too dark a situation.

(*c*) The entry hole only large enough to allow the birds to enter.

(*d*) Nest site of sufficient depth to give a feeling of protection.

In the case of finches, the selection of the nest site is also important. In particular the risk of desertion is reduced if the nest sites offer protection and, in the case of Gouldian finches in particular, are rather dark.

(3) *Selection of Nesting Materials.*

The important business of nest-building in finches is aided by offering nest-building materials which are attractive. White feathers are more attractive than dark feathers, soft fine grass than coarse grass, etc.

It should also be borne in mind that many finches build sleeping nests, and that nest-building activity is not entirely bound up in the reproductive cycle. In some finches, the nest-building instinct is so strong that if unlimited nesting material is available, new nests are built, even during the reproductive phase, so that the eggs are built over without incubation taking place.

(4) *The Stimulating Effect of Other Birds of the Same Species.*

With a number of the social species, the prime example being the Budgerigar, the sight and even sound, of other birds of the same species is a powerful stimulus to induce the onset of reproductive activity. There are many reported cases of a single pair of Budgerigars, although in good physical condition, making no attempt to reproduce. On being placed within sight or sound of other Budgerigars, breeding commences.

As a general guide to the avoidance of abnormal breeding behaviour, the following procedures are recommended :—

(*a*) Where this is practicable, allow psittacine birds to select their mates before the onset of puberty. Always be prepared to intervene in cases where the partners appear incompatible.

(*b*) Provide a wide range of attractive nest sites.

(*c*) Provide attractive nesting material, but not in excessive quantities.

(*d*) Keep gregarious birds in colonies, or within sight and sound of others of the same species.

(*e*) Provide adequate and suitable food.

(*f*) Keep disturbances down to a minimum. Never inspect nests unless you have a good reason for believing something has gone wrong, otherwise you may induce in the parent a feeling of insecurity in an otherwise satisfactory nest site.

Some other Sundry Effects Induced by Captivity

(1) *Wire Netting.*

If a wild bird is confined in a wire netting aviary, it will continually fly into the netting until it becomes exhausted or is injured, unless very adequate cover is provided. The reason why wild birds attempt to get through wire, whereas aviary birds only fly into the netting, in moments of uncontrolled panic, is not because the former are anxiously trying to regain their freedom. Birds have a fair ability to acquire knowledge, and it does not take them long to learn that wire netting

is an impassable barrier. A wild bird is unable at first to realize this, and treats the netting as it would a network of twigs—it attempts to force its way through. By using small cages with only a small part of the lower front wired in, wild-caught birds may be quickly educated to accept wire-netting as impassable with a minimum of damage to themselves. It is also worth mentioning at this point, that while birds quickly learn that they cannot get out through wire, they also quickly learn that it prevents the ingress of enemies. For this reason birds which are habitually fed from the outside of the cage or aviary, and are very steady and allow very close approach from the outside, are readily induced to panic when a hand is put into the cage or a person enters the aviary. I know of authentic instances where intelligent parrakeets kept at partial liberty learn to associate the cage with protection from foes. When confined, they pay scant attention to hawks and cats, but treat the same creatures with extreme circumspection when at liberty.

(2) *Fear and Feeding*

A curious sublimation of the escape reflex in many birds finds expression in inducing feeding. Take a small finch out of an aviary and put it in a small box cage. Although obviously worried, the chances are that it will start husking seed immediately. This reaction is of obvious value both with sick and with newly trapped birds. Without any other treatment at all, sick birds stand a far greater chance of recovery in a small cage where they are only moderately disturbed, while the effects of the shock of capture are greatly lessened in the same way.

(3) *Roosting Behaviour.*

Most finches normally roost in the heart of thick low bushes. They have no instinctive aversion to entering dark places, and will normally roost in the shelter provided. Most psittacine birds seek a high and only partly protected roost (excluding those species which normally roost in hollow trees).

Aviculturists often experience difficulty in inducing parrakeets to roost in the shelter provided. This is because it usually entails the bird having to enter a darker place and many shelters are lower than the open part of the flight. Thus to enter the shelter the bird has to overcome two instinctive aversions—it has to leave a lighter for a darker place, and it has to leave a high for a lower perch. Birds can be *trained* to do this, but this article is trying to stress the importance of avoiding such measures because of the possibility of thereby influencing the mental make-up of the bird. The answer is to have high roomy, well-lit shelters with the roosting perch the highest available in the aviary.

Discussion

No animal can be classed as healthy unless all its processes, physical and mental, function properly. Successful aviculture depends upon healthy birds. By a full comprehension of the combination of instinctive, acquired and reasoned reactions which make up the mental processes of a bird, the aviculturist can then better understand how to avoid those traumas or injuries to the nervous system which will eventually lead to incomplete health.

Aviculture is more than putting birds in cages or aviaries, giving them food and water and awaiting the results. It also entails a careful study of *all* the needs of those birds and a careful training or adaptation to the conditions that can be provided. One hopes for the day when ornithologists will fully appreciate the value of aviary birds for detailed studies in bird behaviour. This day can only come when, through a full and complete study of his subject, the aviculturist can eliminate those vices and abnormalities in behaviour which arise from conditions from which no bird can adapt itself and still retain complete mental and physical health.

Summary

Some aspects of the effects of confinement on the mental processes of undomesticated birds are discussed.

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NOTES ON THE LATE MR. F. H. RUDKIN'S COLLECTION AT BARDSDALE, CALIFORNIA

By Sydney Porter (Derby, England)

In March, 1956, the late Mr. Francis H. Rudkin reached the ripe old age of 95, and a month later he was with us no more.

In his obituary it was recorded that his death coincided with over a hundred years of aviculture in the Rudkin family. The tradition is still carried on by his son, Mr. Harold H. Rudkin.

Second and third generation aviculturists are rare, for the onerous chores connected with bird keeping so often fall to the lot of the unwilling boy who would sooner be out playing football than cleaning out cages and aviaries. This in time develops into an anti-bird complex on the part of the boy. However, I am sure no such thing ever happened with the kind and amiable Mr. Rudkin, for his son has one of the finest collections of psittacine birds to be seen anywhere.

Mr. Rudkin, senr., had a great zest for life, and was active with his birds almost to the end. He was known far and wide not only as a great aviculturist, but as a generous, sincere, and helpful friend.

Hardly a day passed but some one interested in birds dropped into the ranch to see him. Mr. Rudkin must have been one of the Society's earliest members, joining 56 years ago in 1902, when he lived in his native Leicestershire before emigrating in 1912 to California, and settling near Fillmore, about forty miles north of that now famous suburb of Los Angeles, known as Hollywood.

Few townships have a more pleasant setting than Fillmore, situated in the wide and fertile valley of the Santa Clara River amid vast orange, lemon, and walnut orchards, and surrounded by high, green, and picturesque mountains often snow covered in the winter. It enjoys an almost perfect climate, and is ideally suited to the pursuit of aviculture. It was here that the late Mr. Rudkin and his son had their aviaries, and in 1948–49 during a stay in California, I had the pleasure of meeting both father and son, and was hospitably entertained by Mr. Harold Rudkin at his charming home near the centre of the town.

When on a visit to that country in 1949, Mr. and Mrs. Harold Rudkin persuaded me to come out again and make my home with them during a prolonged visit in 1950–51. Only those who have visited the glamorous "Golden West" for any length of time can appreciate the great wealth of friendship, hospitality, and kindness one meets out there.

One is used to superlatives in connection with many American enterprises, and these are certainly applicable to the aviaries and their inmates belonging to many Californian aviculturists, especially to those of the late Mr. Rudkin, whose ranch was situated about a mile or so out of Fillmore.

The main block consisted of a vast group of flights varying in size, but mainly 14 feet by 16 feet, 14 feet by 6 feet, 14 feet by 3 feet, and all 10 feet high. In the main part there were about a hundred enclosures, most of them being built around and opening into two large inner flights. These were used to give the occupants of each aviary a few days extra flying space and a chance to eat the growing green food, the aviary door being left open and the birds finding their way out and returning at will. In the course of time they all became used to this arrangement. There was no trouble about catching the birds to put them back in their own compartment again and nearly all flew back there when one entered the large central aviary.

Mr. Rudkin, senr., lived on his own except that a friend tidied up in the mornings and made the midday meal and someone provided by his son helped for an hour or two a day with the birds. He never felt he lived on his own, but rather that he was surrounded by friends feathered and furred, for he had a faithful old Airedale and a number of cats, which strangely enough never touched the birds.

Not content with looking after the birds he (during the season)

hatched in incubators and under hens vast numbers of turkeys, pheasants, peafowl, and domestic poultry, a job which few men half his age would care to tackle, as the eggs in the incubators had to be turned at certain periods during the day and night.

Breeding lovebirds was one of Mr. Rudkin senr's specialities, and it was a heartening sight to see, when the ranch was first visited, many hundreds of these birds amongst which was not one hybrid. Great pains were taken over the years not only to keep the stock pure, but also free from poor or degenerate specimens.

The species represented were Nyasa, Fischer's, Peach-faced, Masked green and blue. Black-cheeked and Abyssinian were kept and bred for some years, but for some unknown reason gradually died out. Perhaps these species are not so virile as the others.

The birds were kept and bred on the colony system, as it would be quite impossible to give each pair a flight of its own.

The Peach-faced were the most numerous. Three pairs of these had been obtained thirty-five years ago from Germany, as there were none at that time in the U.S.A., and although no fresh blood had been introduced, they were quite the largest and best examples of this species I had ever seen. Of the lovebirds they were the most regular and prolific breeders, producing three broods in a year. Mr. Rudkin said that though he never counted them, he must have bred hundreds in the course of a year.

The nest-boxes were fairly large, and bitten-up palm leaves were used by the birds in the construction of their nests. Sometimes the box was filled to capacity, while in other cases only meagre nests were made, depending on the caprice of the individual pair.

The food of these, and also the other lovebirds, was canary, millet, wheat, oats, and groats, and for green food an abundance of New Zealand spinach.

Seven or eight pairs of the birds were kept in flights 16 feet by 6 feet and 10 feet high. There was no shelter to these, as this was unnecessary owing to the mild climate, but part of the roof was covered by wood, and this extended half-way down at the back to give protection against driving winds which all, except sea-birds, hate. As soon as the young could fend for themselves they were taken from the aviary.

Six pairs of Nyasa Lovebirds were purchased over thirty years ago, and none since added to the stock, yet the birds appeared to be fine healthy specimens. However, these proved to be not such free breeders as the others, but in spite of that many hundreds were reared over the years, and distributed amongst other American aviculturists. There must be few other people in the world to-day who possess such a large, healthy, and pure stock of this species as that at Fillmore.

Mr. Rudkin told me that some years ago he had sold some of the birds to an amateur who later returned to say that the birds were no good as they produced yellow young ones ! Now most aviculturists, myself included, would have told the owner how sorry they were, and have offered to exchange the pairs, but not so Mr. Rudkin, who told him what a rare and wonderful thing it was for them to produce pure lutinos, and offered to buy the parents and young back at an enhanced price. No decision was reached, and the owner was never heard of again. Since that day no single lutino ever appeared amongst all the hundreds bred.

However, there was better luck with the Masked Lovebirds, of which the original stock was only three. In spite of the inevitable in-breeding the present stock are fine upstanding birds, this again is due to all weakly or degenerate birds being removed. About twenty years ago a blue young one was found in a nest with three greens. When adult this bird, a male, was mated to a normal green female. These eventually produced 25 per cent blue. Later a further blue appeared in another nest, this time luckily a hen, and mated to the first blue produced all blues. These were the source of the many thousands of blue Masked Lovebirds in the U.S.A. to-day. These birds proved to be better breeders than the normal Masked Lovebirds, and soon numbers were distributed to aviculturists far and wide. Unfortunately, it is quite a different story with these birds in Great Britain.

The blue Masked produced by Mr. Rudkin were fine, large birds with the light areas a pure white. In Great Britain the birds soon seem to degenerate, and become smaller with the colour less intense. The price of these birds when I was first in California was $15 a pair, at that time equal to 75*s*.

Mr. Rudkin had a blue lovebird which was a great pet, it had been born without wings, and had been hand-reared. It was quite without fear, and had the run of the house with the Airedale, although it had a cage in the living-room when it wished to retire there. The agility with which this bird got about was amazing. If in its cage, of which the door was always open, it wanted to get on to the dining-table, it would gradually lever itself on to the floor, make for the dog, climbing eventually on to its head, then on to Mr. Rudkin's knee, up the table-cloth, and on to the table, where it always shared the breakfast, eating eggs, bacon, bread, and in fact anything in the food line. It was an endearing little creature, and I wonder what has happened to it now.

Like the Nyasa, the Fischer's Lovebird did not seem as productive as the other species, which is quite the reverse in Europe. This species being the common and most easily raised lovebird and the most frequently offered for sale.

The conditions under which some of the lovebirds are kept and flourish in California would amaze the average British aviculturist.

At one place I saw vast numbers kept in large enclosed huts with practically no light or ventilation, never cleaned out, the floor inches deep in seed husks, droppings, and dead birds, yet the birds lived and bred with the fecundity of mice. The secret of their survival being the exceedingly dry atmosphere in which all moisture quickly evaporates, the debris being soon reduced to dry dust in which bacteria cannot exist.

Many people retire to California on modest incomes and look for some hobby or pastime which will help them to eke out. Some take up bird-breeding, knowing nothing whatever about it; the sunny climate is so conducive to fertility that often they are very successful, but in time the supply exceeds the demand. This is especially applicable to pheasants.

There is no doubt that the famous Californian sunshine is a great factor in producing fine psittacine birds of all species and preventing the degeneration which occurs in the more northernly lands. It supplies something which no amount of stimulants or artificial foods can substitute.

(*To be continued*)

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NOTES ON BIRDS SEEN AT PRETORIOUSKOP, KRUGER NATIONAL PARK, TRANSVAAL

By Sydney Porter (Derby, England)

(*Continued from Vol. 55, No. 1, p. 5*)

The Oxpeckers (*Buphagus africanus* and *B. erythrorhynchus*).

Of all the birds I met with in South Africa, the Red-billed and the Yellow-billed Oxpeckers stand out as the strangest. Supposed to be allied to the Starlings, but singularly unlike them in looks and habits, they are about as big as a medium-sized woodpecker and in demeanour rather resemble those birds, insomuch as they use the bodies of the large "Game" animals in the same way as a woodpecker does the trunk of a tree.

Oxpeckers (Tick-birds, would be a much more appropriate name, but this is applied without much justification to the Buff-backed Egret) are more or less parasitic on the large herbivores such as Antelopes, Giraffe, Rhinoceros, Buffalo, etc.; living mainly on the ticks which adhere to the hides of those animals. The movements of the birds are strangely rapid and jerky, and the ease and speed with which they move over the bodies of their hosts must be seen to be

believed ; sideways, forwards, backwards, all the time in a restless effortless, and mechanical-like way.

The bird will just let itself drop off the head, say of a Giraffe, and then automatically stick on again when it reaches the place it wants, somewhere on the animal's body. It seems to do this without movement of the wings or feet, or at least it gives that impression. I have seen them run up the back legs of a Zebra, upside down along the stomach, squeeze between the front legs, up on to the neck, over the mouth and nostrils and finish up on the back in less time than it takes to read this sentence. Every part of the host's body is gone over, and no objection is made unless the bird puts its head into the animal's ear. Sometimes a whole row of the birds will perch on the back of a large mammal such as a Rhinoceros or up the neck of a Giraffe and remain stiff and quiet for a long time ; at the slightest sign of danger, however, they will fly into a tree and with loud harsh cries warn their hosts of the impending peril. For this reason they were detested by the old time . . . and the present day slaughterers of Africa's so-called " Big Game ".

Oxpeckers, as their vernacular name implies, also give their attentions to domestic cattle, or at least used to, which in keeping with the wild animals seemed to appreciate their ministrations. But since the compulsory dipping of cattle in South Africa and the use of arsenical fluids, the birds have been largely exterminated over much of their range and are not usually seen outside the Game Reserves, where of course there are no cattle.

It is said that horses resent the activities of these birds and refuse to allow them to perch on their bodies but donkeys on the other hand apparently seem to enjoy being eaten alive by the Oxpeckers ! This, I am sure, is not one of those fallacies such as the Kea eating sheep, or eagles eating children, as it is vouched for by Captain Stevenson-Hamilton, whose book, *Wild Life in South Africa*, is a masterpiece of observation collected during a lifetime spent with wild animals.

On page 296 of the book he says, when speaking of these birds, " Although they are certainly of benefit to cattle, and make no more impression on their hides than they do on those of the wild ruminants, it is otherwise with donkeys, to which they do more harm than good. Not content with picking off the ticks, they proceed to enlarge the little abrasion which the insect leaves behind it, until at last a yawning cavity streaming with blood is formed . . . Not the least remarkable point is that the donkeys habitually take no notice whatever of the birds, however much they suffer, and make not the slightest effort to get rid of them, being in this way quite different to horses, which will not endure their presence for a minute. Therefore to keep donkeys in good condition, where the tick birds abound, requires the most constant watchfulness. In fact, at Sabi Bridge it has always been

necessary to employ a small boy whose sole duty consists in scaring them from the donkeys, while at grass." However, that, no doubt, is a thing of the past, for one sees very few donkeys in South Africa these days.

Whilst on the subject of birds eating mammals, the following episode may be of some little amusement. In the days before I realized that the quickest way to kill my birds was to send them to bird shows, I used to take a good many to an exhibition held annually in Nottingham and known as " The Foreign Bird Show ". It was to support local charities and was held in one of the city's spacious restaurants. Encountering at one of these shows an enthusiastic reporter, I was asked if I could give any sensational details about a pair of aviary-bred and rather flamboyant Occipital Blue Pies. I had to admit that I couldn't, and in my innocence and general ignorance of " news-hounds " I tried to explain about their habit of sometimes harrying and mobbing large predatory mammals such as Tigers and Leopards, thus warning off their prospective prey. Finally, unable to stand the constant chivying of the birds, the carnivores moved away from the immediate neighbourhood and took up residence elsewhere. In the columns of one of the local evening papers appeared an article headed " Birds at local show which kill and eat tigers " ! Since then I have never given reporters any information on the habits of birds, but it does seem true that Oxpeckers at least do eat donkeys !

In colour these birds are a uniform silky brown, yellowish on the rump and lower breast, this more so in the Yellow-billed. Though closely allied, the difference goes deeper than a matter of colour, in fact the late Dr. Roberts, the well-known South African ornithologist, gave each bird a different generic name.

Both species are very comical-looking birds, and remind one at first sight of clowns. This is perhaps due to the fact that there is a broad ring of bright yellow skin around the brilliant red eye (in museum specimens this is hardly noticeable), and also to the fact that in the one species, the sealing wax red bill is curiously rounded at the end and is broader in the middle than at the base, which makes it look like a bright red nose. The whole shape, stance, colouring, and demeanour make it look more like a strange mechanical toy than a bird, that is of course when seen in its natural habitat.

I once watched a flock of these birds on a herd of young Impalas, perhaps one of Africa's most beautiful smaller antelopes. The reaction of each individual animal to the birds was most interesting as it was evident that they had only recently come in contact with the birds. Some of the young buck declined to let the birds have anything to do with them and violently refused to allow the birds to settle on their bodies. Others took no notice whatever of the birds, and just let them do what they wanted, and others turned their heads and affectionately nuzzled them, as if welcoming old friends.

Sometimes the birds would almost disappear inside the animals' large ears ; at other times this inspection would be instantly and furiously objected to. It was very amusing to watch the way the birds slid up between the hind legs and lifted up the tail of the young antelopes and looked underneath in their search for ticks. It was a strange sight to see the Oxpeckers clinging tightly on to the back of the Impala as they galloped and sprang along through the Bush, for their agility and ability to take flying leaps must be seen to be believed. The birds reminded one of budding jockeys going for their first gallop, for the yellow ring round the eye, as well as giving them a comical look, also gives them a peculiar quizzical and frightened appearance.

During the whole time I studied the birds I never saw one pass any excrement while on an animal, and no matter how long I watched them on the broad back of such a huge beast as a Rhinoceros did I notice any trace of defecation. It is without doubt one of those strange and wonderfully arranged associations between two very dissimilar creatures assigned by Nature for the advantage of each and about which we know so little.

The digestive juices of the Oxpeckers must be very powerful to be able to dissolve the extremely tough and leathery skins of the detestable ticks found in the tropics. It is practically impossible to kill them if not fully gorged with blood, unless one puts them on the fire.

Though very seldom brought into this country two pairs of Oxpeckers were, I think, imported at different times in 1954, and three Yellow-billed were received by the London Zoo in 1955. A pair were shown to me on arrival by their importer who got them from Natal, and who called them " Blood Birds " as they were fed on nothing but liquid blood. They were bought by an exhibitor who sent them round to various shows, but they were never properly staged nor did they look at ease. This pair I think eventually passed into the hands of a friend, but one of them died shortly afterwards, due I suppose to their constitutions being ruined by the initial diet of pure blood.

Exhibited in a large show-cage lined with padded ox-hide with the hair left on, over which they could run about and feel at home, they would have made a very attractive and rather sensational display.

Kept in an aviary with an indoor section partly covered with the ox-hide, they would no doubt do well. They certainly never seem very happy or comfortable on ordinary perches, any more than does a woodpecker. They would need to be fed on chopped raw meat, live insects, and a rich insectivorous food with the addition of perhaps, a little blood, which would certainly put me off keeping them ; though I suppose raw blood straight from an animal would be quite a different substance to the digested fluid which was in a tick's body. The birds must consume quite an amount of this during a day's feeding when one

thinks of the number of ticks they eat, most of which swell up from the size of a round flat marrow seed to the size of a small cherry when fully gorged with blood.

The thought of these repulsive insects makes one shiver! Millias, writing in his well-known book *A Breath of the Veldt*, says about the birds, "To aid it in these forays after insects Nature has endowed the rhinoceros bird with a tail of horny feathers for support and claws of such extraordinary strength and sharpness that they can cling on securely while performing acrobatics most amusing to witness. The prehensile power of the claws is, as I have found out by experience, so great that when a dead bird was thrown on to the back or sides of an ox, so that the feet touched the animal's hide, the claws held fast at once and could not easily be withdrawn."

THE BUFFALO WEAVER (*Textor erythrorhynchus*).

This bird gets its name from the habit of frequenting herds of Buffaloes and perching on their backs in search of parasitical insects which infest the hides of their hosts. But as this is only a side line as it were, they do not have the highly specialized physical economy of the Oxpeckers. This seems to be a strange habit for a weaver bird, but then one gets surprised all the time by the seeming deviations from the normal in the habits of animals.

This weaver is more omnivorous than most of the family, feeding mainly on berries, fruit, and insects rather than seed, though this too is eaten, when no doubt the former foods are not available. They are most unweaverlike, nearly the size of the European Blackbird, and similar in colour, but marked rather haphazardly with dirty white, the male possessing a heavy red beak; the female is a very drab and rather nondescript-looking bird.

At the Skukuza camp in the Kruger Reserve are several large trees, and in them are the huge nests of Buffalo Weavers, the largest of all the weavers. The nests are extraordinary looking structures, the smallest could be contained in an old-fashioned clothes basket, but the largest are at least six times that size. Externally they are constructed of twigs from the acacia thorns, about 12 to 24 inches long, and covered with the most formidable spines of about 2 to 3 inches in length. Quite how the birds break these off is a bit of a mystery, possibly they find them on the ground under the trees, though one would think they would be too brittle for weaving if the wood were dead.

Two or three pairs of birds share a single nest, but each has a separate entrance to their chamber. Around the mouth of these passages the twigs are very compactly woven. No doubt some other type of material must be used for the lining of the nesting chamber. Like most other weavers their lives are very public and noisy affairs, the birds always very much in evidence, quarrelling, and generally

fussing around the nesting site. The male bird spends a great deal of his time arranging and putting in place odd twigs that have become loose, he works with amazing dexterity in handling and fitting the thorn branches in place.

One would think that a nest which is a bristling mass of thorns would be a very safe place and free from enemies, but this is not so, for at the breeding season snakes, usually coral snakes, take up residence in the nesting trees, actually living in the nests themselves and taking a toll of about 50 per cent of the young birds. If the proportion gets higher than this, the birds leave and set up a colony in another tree.

The young of these weavers are looked on as a delicacy by the natives, and numbers are taken for eating, though how they get at the birds is a mystery, as the nests appear almost impregnable. On some of the trees containing the Buffalo Weavers' nests, were immense colonies of the nests of Masked and allied weavers. These were usually built on the very tips of slender branches, but I noticed that often a dozen or so nests would be attached to the loose ends of the twigs which composed the nests of the weavers under discussion. These trees constituted veritable weaver cities, with many hundreds of inhabitants. Consequently, they were the centre of a general pandemonium, and the noise as the birds flew to and fro with material for the nests, food for the young, displayed to sundry hens, quarrelled and fought, was simply incredible.

The habits of most weavers, especially those of the *Hyphantornis* group, are, during the breeding season, the very reverse to those of most birds, which become shy and secretive during this period ; the weavers then seem to be in a constant state of turmoil, extreme volubility, and bustling activity. In one of the ranger's gardens at Skukuza was a large bird bath which had a constant stream of visitors, but no birds used it more than the Buffalo Weavers ; after one bath each bird returned time and time again from a nearby branch until it was absolutely soaked and could hardly fly.

THE CAPE AND AFRICAN WAGTAILS (*Motacilla capensis* and *M. vidua*).

South Africa possesses seven species of wagtails, but only two are common, the others being locally distributed, or migrants from Europe.

The commonest is the Cape Wagtail, a most charming and endearing little bird, even tamer and more familiar than our own Robin, which is to be seen about gardens, public parks, even streets, and is known to everyone. In the hot weather they are to be seen on the corrugated iron roofs which for some reason attract a great number of flies ; here they have a wonderful time chasing after the insects. Sometimes the birds run along the edges, now and then peering underneath looking for spiders.

On the most remote and distant beaches seldom trodden by the feet of man, on a busy railway station, running in and out of the waiting rooms, between the railway trucks, or under the seats on the platform, with waiting passengers on them, or in the city streets, these engaging little birds can be seen always tame and friendly.

As well as the Cape Wagtail one also sees in the Kruger National Park the African Pied Wagtail, a bird very little different from our own European bird, but differing from its congener by being nearly always found in the vicinity of water.

THE RED-SHOULDERED WHYDAH (*Coliuspasser axillaris*).

The modern tendency to change birds' scientific names as often as possible, thus rendering them of little use, has been extended of late years to changing their vernacular names as well. The familiar Green Singing Finch now becomes the Icterine Canary, the Yellow-fronted Canary, the Yellow-eye, to mention only a few of its recently designated names. On turning up the latest references to the well-known Red-shouldered Whydah, I find that has become " the Fan-tailed Widow Bird ", it seems that the prerogative of changing birds' vernacular names is no longer that of the bird dealers. This well-known bird is a common and conspicuous inhabitant of the Low Veldt in and around the Kruger Park, at least the males are, for search as I would, I seldom saw a female during a stay of several months in the Eastern Transvaal. These remain hidden in the dense marsh vegetation where the birds nest.

Like all the whydahs of the non-parasitic group, their plumage, when seen in the birds' native haunts appears to be the most intense velvety-black which makes a good background to show off the brilliant red shoulder patches. All these whydahs have a strange nuptial flight, which is basically a slow-motion display, each species' flight differing slightly from the other. This bird has a slow, flopping and meandering flight, exactly like that of a large tropical butterfly, and by a newcomer to the district, might easily be taken for such ; in fact it looks exactly like a giant " Red Admiral ". During this flight the wings take on a peculiarly rounded appearance, and the body feathers are puffed out until the bird looks almost twice its normal size. This is, I think, accentuated by the intense blackness of the plumage.

A company of these birds will take possession of a reedy vlei (small patches of marshy ground found all over the Low Veldt), and there they will construct their beautifully woven nests between the reed stems, looking like miniature cradles hung upside down, the entrance hole being underneath. The male takes up his stand on a reed or tall grass stem, or sometimes on a wire fence, and when he sees a female in the grass, he slowly sails up to her and hovers above like some

giant butterfly about to sip the nectar from a tropical blossom. If the hen is on the ground itself, he will slowly circle round with the slow-motion, flopping butterfly-like flight for quite a long time. It is surprising how much larger he looks than his sombre-coloured spouse, yet when he is out of colour he is the same size.

Following the course of a stream one comes across dozens of male birds, each seeming to have his own special area, and attacking all other males who intrude. Yet I have found that in an aviary this is one of the most pacific of the whydahs. A few years ago I thought how attractive a whydah aviary would be with all the males in full colour, but I had to learn that with the exception of the Red-shouldered it was next to impossible to keep two males of the same species together when in nuptial plumage. The worst offenders are the Red-collared (*C. ardens*) who not only fight their own species but all other kinds of whydahs. This bird is also seen in the Kruger Park, but only sparingly, and in quite different districts to the Red-shouldered. It is seen amongst the tall reeds by the wide rivers and pools, usually singly, and in breeding plumage is wild and difficult to approach.

Some Boer farmers with whom I stayed for a time on the borders of Portuguese East Africa used to shoot hundreds of whydahs and weavers when they flocked in the non-breeding season and, after baking them in a large oven, got the natives to pull their heads off and pluck them, when they would be served up at a meal and eaten whole. Needless to say, I never partook of the repast.

Both forms of the Paradise Whydah are to be seen in the Park, the Broad-tailed and the Narrow-tailed (*Steganura aucupun obtusa* and *S. paradisea*). They inhabit entirely different districts to the two former ones, usually away from water on the dry acacia thorn savannah where they can usually be seen feeding on the ground with their long tails trailing after them. It is a wonderful provision of Nature, or perhaps one should say evolution, that the bird is able to keep its tail, which is not at all stiff and at least three or four times as long as its body, right off the ground. This is accomplished by the fact that it is slightly curved and balanced in such a way that only the tips almost touch the earth.

The South Africa sub-species is a much larger and finer bird than the well-known and frequently imported West African one. This was known in the old days as the Yellow-naped or Verreaux's Whydah. Like the rest of the Viduine Whydahs, this is parasitic, and as far as is known its host is the Melba Finch. Several aviculturists in South Africa who have had these waxbills nesting in the same aviary as the Whydahs, have been lucky enough to rear both species in the one nest.

Another of the whydahs which brought back nostalgic memories was the Pin-tailed (*V. macroura*), also an inhabitant of the dry veldt.

This species is perhaps the best known of all from its habit of frequenting the gardens and yards around the farmsteads, especially around the mealie sheds where he and his small flock of sombrely coloured wives feed on the mealie meal which is the standard ration for the native farm workers. It is also a familiar object on the wire fences and telegraph wires by the roadsides.

The male's nuptial flight is higher than most of the whydahs except the Giant. Besides making these high flights and dashing down to earth like a meteor, he has a peculiar way of hanging in the air with slowly beating wings, meanwhile jerking his body forwards as though he were trying to use his long narrow tail as a switch. During this time the five long tail feathers are widely separated.

The Pin-tailed Whydah is supposed to be parasitic on the smaller waxbills, but I noticed that there was a very close association between these birds and the Bronze-winged Mannikin (*Spermestes cucullatus*) which like the whydahs are very commonly found around human habitations. I rather think it might be found they are parasitic on these birds.

THE BRONZE-WINGED MANNIKIN (*Spermestes cucullatus*).

This is an old favourite from childhood days, when one was able to buy a pair for 2*s*. 6*d*. It is a generally well known and endearing little bird, very common over the dry bush veldt, but found most prolifically around the farmstead and native huts and, when the conditions are suitable, it is even more familiar and confiding than the English Sparrow.

It has the habit of flying on to the tall fragile heads of flowering grasses and bearing them to the ground, where it feeds on the green seeds. It can often be seen nipping off the soft downy heads of these grasses and flying with them trailing behind into the thorn trees, where it builds colonies of snug little rounded nests, with the hole at one side, warmly lined with downy flowering grass heads.

THE SPARROW-WEAVER (*Plocepasser mahali*).

This is a little noticed weaver because of its unobtrusive plumage which rather resembles a clean edition of a female English Sparrow with a conspicuous white eye streak. The birds live on the dry acacia veldt and feed on the seeds of tall grasses which grow from five to eight feet high. These seeds are one of the great discomforts of the veldt, as they are needle-sharp at the ends, and penetrate one's clothes, working their way in, until finally they get into one's flesh.

As single grass stems are not capable of supporting one of these birds, they gather four or five stems together which are held by the feet while the birds feed on the seeds. It is rather a strange sight to see a flock of these birds each feeding on an arch of grasses.

BARBETS.

When staying at Pretoriouskop one frequently heard a very loud ringing and metallic " tong-tong " uttered over long periods and, like some bird calls which are ventriloquial, difficult to locate. Usually it was heard in the vicinity of thick trees or heavy bush. This was in due time traced to the Red-fronted Tinker Barbet (*Barbatula pusilla*) one of the most beautiful of the smaller African birds, a diminutive barbet about 4 inches in length. It is not much larger than a waxbill, and is a most beautiful pale green below, with a red forehead band and the upper parts a mixture of spots and stripes and a galaxy of black, white, brown, sulphur-yellow, gold, etc.

Its call is quite out of proportion to its size, and can be heard for at least half a mile on the open veldt. When once located one finds the birds not at all shy, and one can watch them creeping about the thick foliage of the trees in search of small berries on which they seem to feed almost exclusively ; usually these are so large that the bird finds a difficulty in swallowing them.

Though a good many species of these miniature barbets are known, very few have ever been imported into this country. They would make most desirable candidates for aviculture. Some years ago there were some in the Small Bird House at the London Zoo which appeared quite long-lived, besides being tame and intelligent, and remained, all the time I saw them, in the most immaculate plumage. It is necessary to give them a small hollow log or sleeping box with a very tiny entrance hole, for they not only roost but spend quite long periods during the day in it. The demeanour of these little birds is quite different to that of their larger relatives.

Two of the ordinary barbets were to be seen on the wooded kopjes or around the fruit gardens, the well-known Black-collared Barbet (*Lybius torquatus*), a very much larger bird than the previously mentioned bird, and one which is frequently imported into Great Britain. This utters many resounding calls as it sits in the thick trees or feeds upon the berries and fruit of the many species of veldt trees.

I became quite friendly with one of these birds when I used to go and read or sunbathe on a certain kopje. Whenever I went the bird was in a small berry-bearing shrub, and we had quite a mutual interest in each other. The berries from this bush on which the bird used to feed were, at least to me, woody and unripe, with a horrible astringent taste.

The friendly barbet was possibly a young bird as its plumage had not assumed the bright colours of the adult, and it was as yet unacquainted with the wicked ways of the human world where in Africa, as in this country, half the children are armed with catapults or shot guns out to kill or wound any living thing within sight. In fact in Africa they are encouraged to do so by their parents.

Another common barbet in the Kruger National Park is the Levaillant's (*Trachyphonus cafer*), a very strikingly coloured bird in a garb of sharply contrasting orange, black, white, red, yellow, etc. ; with an upstanding crest on the middle of the head. This is quite common in the Eastern Transvaal, where there is wooded country, and is seen about the homestead and farm gardens, especially where fruit is grown. Its loud ringing cries are much more frequently heard than the bird is seen, as it keeps more or less to the thick foliage, as though conscious of its brilliant coloration, and it moves about the trees with a quiet and woodpecker-like demeanour.

In the early mornings it can often be seen drying or sunning itself on the outside of the foliage. At one place I stayed near Johannesburg, there was a tennis court, and owing to presence of white ants it was impossible to use wood for the net posts ; these were of iron with an inside diameter of one inch. Into one of these came every night a Levaillant's Barbet to roost, and each evening this bird, the size of a starling, managed to work its way down to the bottom of the post or hollow pipe, a distance of about 3 feet, sleep the night, turn round and come up head first in the morning. I saw this done every day for about two months or so, and even now I can't imagine how the barbet did it. Whilst in Natal I met someone who had bred this species, and I saw the parents and the young ones.

(*To be continued*)

Note.—It is with great regret that we have to announce the sudden death of Mr. Sydney Porter on 9th January, 1958. An Obituary Notice will appear in the next number of the magazine.—ED.

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BIRD NEWS, 1957, FROM CLÈRES AND CALIFORNIA

By J. DELACOUR (Los Angeles, California)

The collection at Clères is growing. There are again on the lake Barrow's Golden-eye and Long-tailed Ducks which were doing so well there before the war. Among the many young birds reared, three Brazilian Curassows (*Crax fasciolata*) were the first of their family to breed there ; these tropical birds do not lay very commonly so far north. There were nearly twenty young Spicifer Peafowl, Satyr Tragopans, Mikado, Elliot's and other Pheasants ; Emperor, Ruddy-headed, Ashy-headed Geese, and many ducks. Two new interesting parrots are a Greater Vasa, from Madagascar, and a

Vinaceous Amazon, from Brazil, both now seldom seen in captivity. The Quaker Parrakeets bred for the first time.

In my Los Angeles garden, a number of finches and doves have been reared. Five pairs of Gouldians in a small aviary by themselves, produced about forty young ; a pair of Bartlett's Doves, seven, and a pair of Red Mountain Doves, nine. There were some young Mountain Witches, Martinique Ruddies, Brush Bronze-wings, etc. Grey-headed Doves (*G. caniceps*) are nesting.

Lately a number of beautiful Tanagers and Sugar-birds have arrived by air, in excellent condition, from Colombia and Costa Rica. They all settled down outdoors very quickly despite our cool winter nights. There is a particularly lovely pair of Red-thighed Sugar-birds (*Dacnis venusta*), a beautiful and rare species seldom seen in aviaries ; the male is black and brilliant blue, with scarlet thighs, the female grey, blue, and green. The small Tanagers consist of various Euphonias, Chlorophonias, and of the following species of Callistes : *chrysophrys*, *aurulenta*, *icterocephala*, *xanthocephala*, *parzudakii*, *nigro-cincta*, *ruficervi*, *gyrola*, *nigroviridis*. I have now no difficulty in keeping these birds in large, planted aviaries, among other birds. I find that they do well as long as whole bananas are kept away from them. They feed perfectly on pear, apple, grapes, and soaked raisins, orange, and a mixture of banana and sponge cake crushed to a pulp ; they also eat lettuce, hard-boiled egg and cake well mixed together, and to my surprise, they pick up a good many seeds : millet, canary, and cracked maize. Once established, they live for years. I also have some very nice Amazonian Blue Tanagers (*Thraupis cana coelestis*), far the prettiest of the sub-species, with vivid blue on the head and wings, the latter boldly marked with white.

There are many aviculturists in the Los Angeles area : a multitude of amateurs and quite a number of professionals who make a living by the breeding of various parrots and parrakeets, doves, finches, quails, pheasants, and waterfowl. The climate, free from rigorous winter temperatures and of oppressive summer heat, is no doubt the reason of their success, and the general use of houses set in small gardens also helps to spread the hobby. But so far, we have had no proper zoo, and those who wanted to visit a good one have had to go to San Diego, 120 miles to the south. This unfortunate state of affairs is luckily coming to an end. A Society, " The Friends of the Los Angeles Zoo," has recently been organized under the presidency of Mr. Maurice Machris and my Executive Vice-Presidency. We are now negotiating a contract with the city, and the prospect is that, within a few years, Los Angeles will have what we hope will be the finest zoo in the world. Animals and birds will be displayed in very large, barless enclosures, under near-natural conditions, surrounded by the actual vegetation of their country of origin. The climate

is such that all species can be kept outdoors throughout the year, dispensing with large buildings. We shall have all the necessary space and hilly, naturally beautiful grounds. Well-known Californian amateurs, particularly Mr. Ray Thomas, Mr. W. J. Sheffler, both Vice-Presidents, will help us build up an outstanding bird collection. We are planning extensive bird breeding installations as well as the public exhibits, as we consider it an imperative duty to propagate rare species.

I hope this will be the best, though probably the last, of my avicultural ventures.

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LONDON ZOO NOTES

By J. J. YEALLAND

Arrivals during the past two months have been both interesting and varied. Mr. A. A. Prestwich has presented a fine pair of Collared Jay-Thrushes, two Southern Hill Mynahs, and a White-winged Parrakeet. Mr. J. R. Newmark has given a Cuban Finch and a Hunting Cissa (*Cissa chinensis*), also known as the Hunting Crow, Hunting Magpie, or Green Magpie.

Four Abdim's or White-bellied Storks and a Ringed Teal have been given by Messrs. Brooke Bond and Co. Senhor J. de Freitas Martins, a Corresponding Member who has often sent collections of marine animals from Madeira, has presented three of the handsome Madeira Pigeons (*Columba t. trocaz*). These are a pair and one of their young. Whether they have been long in captivity I do not know, but they are quite tame. This race is confined to Madeira ; there is another (*C. t. bollii*) inhabiting the Canary Islands.

From the Parque Zoologico at Jerez de la Frontera two White Storks, a Griffon Vulture, an Egyptian Vulture, two Marbled Teal, and two African Cattle Egrets have been received in exchange.

One Black-footed Penguin has been hatched, and several eggs are being incubated. The Cereopsis Geese are nesting.

The Grey-necked Picathartes collected in British Cameroons by Mr. Webb during 1948 has died. Its age was not known, for it may have been an adult bird at the time of its capture, but during the past two years it has appeared to become short-sighted and, perhaps for that reason, less active than formerly.

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BRITISH AVICULTURISTS' CLUB

The sixtieth meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, South Kensington, S.W. 7, on Monday, 13th January, 1958, following a dinner at 7 p.m.

Chairman : Miss P. Barclay-Smith.

Members of the Club : Miss J. Barnes, P. C. Bath, Dr. Burton Benedict, Hylton Blythe, A. W. Bolton, Miss K. Bonner, Capt. A. A. Clarence, Major C. N. Clayden, W. D. Cummings, J. O. D'eath, Sqn.-Ldr. C. Everitt, Mrs. C. Everitt, Miss R. Ezra, Colonel H. B. Finch, Dr. E. F. Gleadow, H. J. Harman, Dr. E. Hindle, H. J. Indge, Miss E. M. Knobel, Miss M. H. Knobel-Harman, A. J. Lambert, A. L. Leighton, F. Mosford, G. S. Mottershead, W. R. Partridge, A. A. Prestwich, D. M. Reid-Henry, S. Sanderson, R. C. J. Sawyer, D. Seth-Smith, H. A. Snazle, A. C. Soanes, E. O. Squire, Newton R. Steel, E. N. T. Vane, H. Waller, Mrs. G. Wheatley, J. J. Yealland.

Members of the Club, 39 ; guests, 24 ; total, 63.

Before dining, at the request of the Chairman, members and guests stood in silence for a few moments as a mark of respect to the memory of Sydney Porter, a Founder Member, who died on 9th January.

The Chairman welcomed Dr. J. M. Winterbottom, Hon. Secretary of the South African Ornithological Society, and Mrs. Winterbottom ; and then introduced Walter Higham who, of course, really needed no introduction as he is almost an institution with the Club, having shown films on numerous previous occasions. Members were privileged to see the première of " Highlights from my Nature Films ".

This film is the story of Higham's experiences as a nature photographer during the past thirty years. The film starts with monochrome pictures of the days before the arrival of colour, and we see collecting Guillemot eggs, in which the photographer demonstrates how it should *not* be done ; and the Cuckoo actually laying its egg in a Pipit's nest, and later, the newly hatched young Cuckoo ejecting eggs and young from the nest.

With the advent of colour we are shown a Lapwing that is practically white ; a Water Rail carrying its chick ; a Black-throated Diver killing the chick of a breeding pair, and finally the marauder being driven away by the parents ; a Bittern eating its dead chick ; the Golden Eagle at the nest. Some sequences have been chosen for their beauty and include a close-up of the Kingfisher ; a Sheld-duck feeding at a fresh-water pool amongst the sand dunes ; a number of flying sequences.

In a visit to Hungary the Purple Heron, Little Bittern, and Avocet are shown at the nest, whilst the nesting Spoonbills and White Storks are pictured both with their young and in the air.

France is visited to see some of the breeding birds of the Camargue. The highlight of this part of the film is undoubtedly the unique, first cine-film record of the breeding Flamingos, which shows the birds at close quarters, both on the ground and on the wing. We also visit the Broads and see the Monatgu's Harrier ; the Farne Islands with its Puffins, Arctic Terns and breeding seals ; and the Bass Rock and the Gannets.

This film represents the life work of one of Britain's best known natural history photographers. Members who failed to attend this meeting missed seeing a really outstanding and entertaining film.

The next meeting of the Club is on Monday, **10th March, 1958.**

ARTHUR A. PRESTWICH,

Hon. Secretary.

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NEWS AND VIEWS

In the New Year's Honours List Miss Geraldine Russell Allen was appointed O.B.E.

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Walther Langberg, Copenhagen, now sends his full breeding results for 1957 : Grey Parrot, two reared ; Crimson-winged, a nest of four reared ; Golden-mantled Rosella, nine young reared in two nests (the male parent is now 14 years old) ; Splendid, ten reared ; a pair of split-lutino Nyasas had three young lutinos, but two, both hens, died later.

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A correspondent inquires about the origin of the biological signs ♂ for male and ♀ for female. They were originally astrological signs used by the Greeks for the planets Mars and Venus. They were used in the Middle Ages by alchemists, and later still in chemistry and pharmacy. Linnæus adopted them as an easy means of denoting sex.

* * *

W. H. Rose reports that his young Blue-fronted Amazon is thriving, eleven weeks old at time of writing. He writes : " It is remarkably well-feathered and quite able to fly. It shows the red wing-butts and blue forehead, but the yellow is quite pale in comparison with the adults." The parents had three eggs, but two were broken during incubation.

* * *

Sir Crawford McCullagh, Bart., had a remarkably good parrakeet breeding season, 1957. The principal young reared were : 7 Rock Pebblers, 10 Bauer's, 2 Barnard's, 14 Red-rumped (3 yellow cocks and 1 yellow hen), 4 Many-coloured, 3 Ring-necked, 1 Alexandrine × Ring-necked, 2 Layard's, 3 Brown's × Mealy Rosellas, 17 Splendids, 3 Elegants, 2 Jendaya Conures : and the following Lovebirds—Masked, 1 blue, 4 green, 2 green × blue ; 1 Fischer's, 8 Nyasa, and 2 Peach-faced.

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Dr. H. D. Groen, Groningen, Holland, records his breeding results, 1957 : " Nine Stanleys, from two pairs ; 5 Golden-mantled Rosellas ; 4 Pale-headed Rosellas, 1 single young one from the first nest was successfully hand-reared, 3 in the second nest were reared by their parents ; 9 Red-rumps ; 4 Bourke's, first nest 3, second nest 1. The Pennant's, Crimson-winged, and King Parrakeets made no attempt to nest."

* * *

During 1956–57, forty-seven species of birds were bred at the Adelaide Zoo. Amongst the birds listed in the *Report of the Royal Zoological Society of South Australia* are : 2 Common Rheas, 1 Australian Crane, 1 Black-footed Penguin, 3 Ruddy Sheld-duck, 5 Nepal Kalij Pheasants, 2 Eastern Swamp Hens, 3 Tasmanian Native Hens, 2 Bleeding-heart Pigeons, 2 Golden-crowned Conures, 8 Elegant Grass Parrakeets, and 24 Peach-faced Lovebirds.

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The Whooping Cranes in the Audubon Park Zoo, New Orleans—amendment and progress report. 1955, one egg, broken : 1956, two eggs, both hatched ; one chick disappeared after a few days, but the other lived for 46 days : 1957, eggs were laid on 18th and 21st April and hatched on 18th and 21st May. William G. Conway gives a full breeding account and a unique series of photographs in *Animal Kingdom*, July–August, 1957. The younger and stronger chick was then 40 inches tall.

* * *

Dr. Sten Bergman writes from Sorong, Dutch New Guinea : " I have just returned from a journey to the most uncivilized natives of Dutch New Guinea, people not under government control. They are still eager head-hunters and cannibals. In every hut there were plenty of human skulls. All the men went completely naked, the married women had a grass girdle, and the unmarried had nothing on. The men use stone axes and they have knives of human bone (femur). In the necklaces of both men and women I often saw human vertebræ, especially from the neck (atlas)."

* * *

Parrot Finches must surely be amongst the very nicest birds that an aviculturist can breed. Unfortunately, there are now but few in captivity, but the few are in the hands of enthusiasts determined to build up precious stocks. The most successful breeder in the annals of aviculture is undoubtedly N. Nicholson, who this last season had young Red-headed reared to the twenty-fifth generation ! Nicholson has never had recourse to in-breeding, with the result that his strain has improved with the years, the increase in size being an outstanding feature. He is just as enthusiastic as ever, but stresses that but for the understanding and encouragement given by his wife during the very difficult war years, it is possible he might have lost the enthusiasm to carry on. Another very successful breeder is C. af Enehjelm, of Helsingfors. This past year he has bred sixteen Three-coloured, and now has about thirty in all.

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Members will be interested to hear how C. S. Webb and his wife are faring. In a recent letter from Naro Moru, Kenya, " Webbie " writes : "We are situated in a delightful spot at 7,000 feet on the lower slopes of Mt. Kenya. Bird-life is varied and plentiful and we have the advantage of being adjacent to mountain forests, open plains, and the low scrub country which stretches up to the Abyssinian border. On our own property we see daily such interesting things as Giant Kingfishers, Hartlaub's Touracos, Silvery-cheeked and Crowned Hornbills, Olive Pigeons, etc., to mention just a few of the larger birds ; and on the plains nearby are Giant, Jackson's, and Crimson-naped Whydahs, Crowned Cranes, and Ground Hornbills. It is hard to think of an English winter when here we enjoy home-grown fresh vegetables of every sort all the year round and, of course, flowers galore. When the larder is low I have only to walk about 20 yards to our own delightful trout stream."

* * *

J. H. Reay sends news of the birds at " Cranmore " : " The Plum-heads were again disappointing. The hen, after all the usual formalities, retired into the nest-box, and after approximately three weeks of anxious waiting, I found egg-shells on the floor of the flight—but, alas, upon investigation after a few days, there was no trace of any young. Rock Pebblers laid three eggs, hatched two, reared one. Barrabands were again successful and reared three lovely youngsters, a fourth being lost when about ten days old. Two pairs of Bourkes produced eleven excellent young, whilst a third pair deserted their family of three at a week old. This was owing to the interference of a neighbour's cat, one of the rare occasions that the electric fence has failed to stop feline intruders. Many-coloured, two pairs, had three

and four eggs respectively, from which only one young one was produced, and that died after a few days. Egg-binding lost us a very good Splendid, since replaced. Stanleys were not given a nest-box as they were considered too young; Elegants and Turquoisines were also young birds, and on these our hopes centre for next season. The Golden-fronted Fruitsucker continues in fine fettle, even though we have now had him for nearly eleven years."

A. A. P.

* * *

NOTES

Corrigendum

November–December number, 1957, p. 199, the name of the author is K. W. Dolton *not* Dalton.

Breeding Button Quail in California

My two pairs of Button Quail successfully reared more than seventy young between them in 1957. The first clutches of eggs were laid in February, and the sixth clutches hatched in September and October. The smallest number raised from one clutch of eggs was four birds, and the largest was twelve.

The birds were, of course, kept in separate cages, but about six pairs of finches were with them. In addition to canary seed, large white, and small yellow millet, they always had available poppy or maw seed mixed with turkey starter (a high protein mash for starting turkey chicks and pheasants). They were given some fresh greens daily, but no mealworms or other live food was provided during the entire year. A few chicks were lost but, as already stated, over seventy were reared. In all cases the parent birds did all the rearing. The birds were given a large handful of Bermuda grass or devil grass, placed on the sand floor of the shelter (no doors are necessary in the shelters in Southern California), with a branch of evergreen conifer in front of it to provide some privacy.

Normally, I try to limit the clutch of these birds to seven or nine eggs. During the hottest part of our summer one of the hens laid some more eggs after I thought she had started to sit; she laid twelve eggs and raised the lot. She was not able completely to cover all these eggs, and I am certain that the only reason they hatched was the extremely high day and night temperatures that we were having during this time. The young birds were left with their parents for about four or five weeks (until the cock bird started fighting them).

Rae V. Anderson.

* * *

CORRESPONDENCE

BREEDING OF THE HILL MYNAH—A CORRECTION

I am indebted to Mr. H. A. Fooks for pointing out to me that the parents of the young Hill Mynah or Grackle we have recently bred here at the Keston Foreign Bird Farm are not, as originally stated, the Southern Grackle *E. religiosa*, but the Northern one, commonly known as the Indian Grackle, *E. javana intermedia*.

It is true that there is not a lot of difference between them, but, as it is a first breeding, I think it is important that it should be got right. *E. j. intermedia* is a rather larger bird than *E. religiosa*, and has a greater wattle development beneath the eye and less on the nape.

The reasons we supposed that our birds were Southern Grackles were because they were invoiced to us from India as *E. religiosa*, and also because both *Aviculture*, vol. i, and Whistler's *Popular Handbook of Indian Birds*, state that *religiosa* is the most frequently imported species and the Mynah of the Indian bird shops.

Mr. Fooks, however, who has an unrivalled first-hand knowledge of Indian birds, tells me that this is quite incorrect, as by far the most frequently imported is the Indian Grackle *E. j. intermedia.*

The information about the various Indian Hill Mynahs he gave me in his last letter seems to me of such interest that I propose to quote it at the end of this letter.

Before doing so, however, I would like to mention a rather interesting fact that I forgot to put in the breeding account—namely that both the male and female of our pair of Mynahs took turns at incubating the eggs. Also that, judging by our pair, there is a further way of sexing these birds: Immediately above the cock's eye is a small area of bright greenish-yellow skin which is visible through its rather sparse covering of tiny bristly black feathers, while the same area in the hen consists entirely of smooth black feathers. This difference has remained constant after each moult.

After saying in his letter to me that he had had, of course, to go entirely by the photos (illustrating my article), Mr. Fooks went on to say that if our birds came from Calcutta they "would in 999 cases out of a 1,000 be *E. javana intermedia*—the Indian Grackle. If from Bombay, *E. religiosa*. The latter do not come further north than North Kanara and the Northern Circars, where I have myself seen them. In Ceylon, of course, they are the Grackle of the country. *E. javana intermedia* comes from the Himalayas, and is common in Orissa (where the majority of exported birds come from) its range then extends through Burma, Siam, to Cochin China—a huge range and very common in suitable forests. The Southern Grackle is definitely smaller than the Indian, and its bill is more or less one colour, whereas the Indian one pales towards the tip. Almost all Grackles I've seen in England were *E. javana intermedia.* I've only seen half a dozen *E. religiosa* and only about as many *E. javana javana*, which is a very large bird compared to the others. Measurements are about: *E.j. i.* 300 to 310 mm., *E. r.* 250 mm., *E.j.j.* 390 mm. (total length).

If your exporter ships from Colombo, Madras, or Bombay, you are probably right.

I looked up my *Fauna of B.I.*, by Stuart Baker, and in vol. iii find that he confirms that the *Indian* Grackle is *the* cage bird of India.

It doesn't really matter what your pair are, except as a first breeding in England, I think we should be quite certain.

When I used to watch them in their wild state I noticed they were quite carnivorous. I've seen them eat Geckos!"

I was interested in Mr. Fook's statement that these birds would eat Geckos, and can quite imagine that they would eat anything in the way of a lizard or mouse that they could catch, particularly as a pair of Shamas we had at liberty at Keston before the war were great mousers—although, of course, only capturing very small ones.

EDWARD J. BOOSEY.

BRAMBLETYE,
KESTON, KENT.

CHOUGHS IN CAPTIVITY

I read the article by Mr. S. Porter relating to Choughs in the September–October number of the AVICULTURAL MAGAZINE in which, on page 167, he refers to Choughs' alleged eating of grain. In point of fact I did not know that there was any feeling in this direction, so my statement now is in no sense born of prejudice. I am familiar with the birds wild in Wales, and also keep captive specimens myself. I have never seen any evidence of grain-eating by wild birds, but my captive specimens will certainly eat wheat. This I've seen frequently, as at one time the Choughs shared an aviary with Golden Pheasants. Whether this habit extends to birds at liberty I rather doubt, but it is by no means impossible. With regard to Mr. Porter's remarks on the paucity of literature on captive Choughs, this I feel is largely due to the fact that Choughs are strictly protected by law, and since to the best of my knowledge, they are seldom imported, it might be difficult for most aviculturists

to explain away their possession of these birds. Unless " close-ringed " such birds are never likely to appear on sale publicly. My birds have attempted to breed, but so far with no success, as they have never got further than a completed nest. I have prepared notes on the behaviour of Choughs which have been in the hands of the Editors of *British Birds* for months, and notes on Ravens which they have had for two years, still awaiting publication. My experience also extends to Choughs killing passerines which had access to their aviary, crossed bills, and odd aspects of behaviour. Unfortunately it is difficult to make known odd bits of information in the press, and a comprehensive paper needs years of study in preparation, since experience of necessity takes a long time to acquire.

I am always interested to hear of aviculturists' experiences with these fascinating birds, as this might help to collect and make it possible to collate experience gained by what I believe to be only a comparatively small number of people interested in attempting to breed Choughs.

BRIAN C. TURNER.

14 HEATH ROAD,
IPSWICH, SUFFOLK.

COMMON NAMES FOR RARE BIRDS

The Editor asks why it is necessary to give common names to rare birds not already possessing them. Why is it necessary to give common names at all?

The existing ones must surely have been " invented " by someone at some time, and their use can hardly cause confusion in other languages when the scientific name accompanies them as it does in the Notes. It is the scientific name that is internationally understood; the vernacular name will naturally be different in each country, and is not necessarily a translation of the English one.

At what point in rarity is the line to be drawn?

Some modern authors of ornithological works give English names to species, but not to sub-species. Bannerman in his great work on the birds of tropical West Africa gives an English name to both species and sub-species, rare and common. I can see no harm in this provided that the scientific name is also given.

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Neville W. Cayley, *Australian Parrots*.—A. J. LAMBERT, 1 Beechcroft Close, Sunninghill, Ascot, Berks.

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AVICULTURAL MAGAZINE, all or any of Vols. 52 to 61 inclusive.—J. E. HARRIS, Wood Lawn, Uttoxeter, Staffs.

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1953 BEULCKE, M. ; 54 Jan Breijdellaan, Kortrijk, Belgium.
1955 BEVINGTON, Mrs. D. ; Gallowbrook, St. Neots, Hunts.
1956 BEYER, CHARLES E., Jr. ; 117 South Layton Drive, Los Angeles 49, Calif., U.S.A.
1939 *BHAVNAGAR, RAOL SHRI DHARMAKUMARSINHJI OF, F.Z.S., M.B.O.U. ; Dil Bahar, Bhavnagar, Saurashtra, India.

1951 BHAVNAGAR, YUVARAJ SHRI VIRBHADRASINGHJI OF ; Nilambag Palace, Bhavnagar, Saurashtra, India.
1952 BIALLOSTERSKI, W. ; Kruidbergerweg 99, Santpoort, Holland.
1957 BICE, CLAUDE W., Ph.D.; R. T. French Co., 1 Mustard Street, Rochester 9, N.Y., U.S.A.
1957 BILLMEIR, J. A., C.B.E. ; Westbrook, Elstead, Godalming, Surrey.
1945 BIRCH, P. A., F.Z.S. ; "Avian Vale," Dodford, Nr. Bromsgrove, Worcs.
1954 BIRCHALL, Mrs. E. J. ; "Sundown," Storrs Park, Bowness-on-Windermere, Westmorland.
1956 BIRD, ROBERT ; 60 McKenzie Street, Leichhardt, N.S.W., Australia.
1952 BIRD, W., F.R.P.S., F.I.B.P. ; The Coach House, 54 Gwendolen Avenue, Putney, S.W.15.
1948 BIRRELL, Mrs. J. DALZIEL ; Christmas Cottage, Brick Kiln Common, Wisborough Green, Sussex.
1950 BIRTLES, ALBERT ; 169 Royds Street, Rochdale, Lancs.
1952 BLAAUW, A. F. H., O.B.E. ; "de Wissel," Rysbergen (N.-B.), Holland.
1956 BLACK, F. ; 95 Woodlands Road, Sparkhill, Birmingham 11.
1957 BLAKELY, RONALD ; Lincoln Park Zoo, 100 W. Webster, Chicago 14, Ill., U.S.A.
1937 BLAND, W. P., F.Z.S. ; 3 Station Approach, Meols, Hoylake, Cheshire.
1956 BLOOD, Dr. BENJAMIN D. ; Casilla 99, Azul, Buenos Aires, Argentina.
1951 BLOOM, R. T. ; The North of England Zoological Society, Chester.
1956 BLUM, A. J. ; P.O. Box 114, Mt. Healthy, Cincinnati 31, Ohio, U.S.A.
1946 BLYTHE, HYLTON, F.Z.S. ; "Bay View," 7 Clieveden Road, Thorpe Bay, Essex.
1956 BOLTON, A. W., F.Z.S. ; St. Frederick, King's Road, Chalfont St. Giles, Bucks.
1956 BOND, F. ; Mountway Road, Bishops Hull, Taunton, Somerset.
1949 *BONNER, Miss KAY ; 61 Chase Road, Oakwood, London, N. 14.
1940 BONNY, J. W. ; Springfield, 166 Whitegate Drive, Blackpool, Lancs.
1957 BOOTH, J. ; 15 Brookside Crescent, Middleton Junction, Nr. Manchester.
1956 BOUTS, WILLY H. ; Biesterweg 84, Eindhoven, Holland.
1957 BOWMAN, W. R. ; 266 Yardley Wood Road, Birmingham 13.
1951 BRADLEY, R. H. ; 13 Waubesa Street, Madison, Wisconsin, U.S.A.
1950 BRAIN, WILLIAM, F.Z.S. ; Haynes, 30 Rushworth Road, Reigate, Surrey.
1951 BRATLEY, G. W. ; 39 Westfield Avenue, Pontefract, Yorks.
1956 BREARLEY, A. R. ; 30 Cambridge Street, St. Neots, Hunts.
1956 BRIANT, J. H. ; 317 Stone Road, Stafford.
1957 BRIDGES, ARTHUR ; 8 Hawker Street, Moe, Victoria, Australia.
1957 BRIGGS, C. J. R. ; 17 Chatham Road, Battersea, London, S.W. 11.
1949 BROCK, DONALD S. ; 5840 Seminary Court, Oakland 5, California, U.S.A.
1955 BROECKE, GEORGES VAN DEN ; Wakken, West Flanders, Belgium.
1933 BROOKES, Miss F. C. ; Massam Hall, Old Leake, Boston, Lincs.
1957 BROOKS, ELWYN E. ; 3455 South Hoover Street, Los Angeles 7, Calif., U.S.A.
1931 BROWN, E. J. ; 29 Dean Road, Bitterne, Southampton.
1956 BROWN, FREDERICK H. ; 31 Roebuck Street, Mile End, South Australia.
1957 BROWN, G. RAYSON ; 250 West Duarte Road, Arcadia, Calif., U.S.A.
1956 BROWN, J. HATCHELL ; "The Willows," Roadside Delivery, Broadford, Victoria, Australia.
1956 BROWN, L. M. ; Silver Street, Coningsby, Lincoln.
1946 BROWN, RALPH ; The Pleasants, Aberdour, Fife, Scotland.

1950 BROWN, Dr. REGINALD E. B.; 6 Barker Street, Newcastle, N.S.W., Australia.
1924 BROWN, W. FERRIER; 85 Yew Tree Road, Southborough, Kent.
1952 BROWN, W. G.; Strathclyde, 8 Carrick Drive, North Mount Vernon, Glasgow, E. 2.
1957 BRUNS, Mrs. LUCILLE Z.; 117 Paloma Avenue, Long Beach, Calif., U.S.A.
1947 BRUYNEEL, J.; Domaine de Steenokkerzeel, Régie, Belgium.
1942 *BRYCE, Mrs. PETER COOPER; Florestal, Hope Ranch, Santa Barbara, Calif., U.S.A.
1957 BRYCE, WALLACE E.; 1309 Eighth Avenue, Safford, Arizona, U.S.A.
1928 BUCHANAN, A.; 33 Townhill Road, Dunfermline, Fife.
1956 BUCKINGHAM, D. C.; "Rest Harrow," Shenley, Herts.
1938 BUCKINGHAM JONES, C., LL.M.; Dibrugarh, Assam, India.
1925 BUCKSEY, Mrs. D. E.; Bellevue, Green Lane, Hambledon, Portsmouth, Hants.
1957 BUFTON, REGINALD P.; Primrose Cottage, Llandegley, Llandrindod Wells, Radnor.
1953 BUNTON, Dr. P. H.; "Elim," P.O. Addo, Cape Province, South Africa.
1953 BURBRIDGE, J. H.; Ambleside Water Gardens and Aviaries, Lower Weare, Axbridge, Somerset.
1957 BURDEN, D. H.; 500 S. Alameda Street, Compton, Calif., U.S.A.
1956 BURNET, COLIN A.; "Murrunjai," Merriwa 3N., N.S.W., Australia.
1956 BURT, F. J., F.Z.S.; "The Hollies," 78 Tollers Lane, Old Coulsdon, Surrey.
1952 BURTON, M., D.Sc., F.L.S., F.Z.S.; British Museum (Natural History), Cromwell Road, London, S.W. 7.
1957 BUTEYN, JEROME; Star Route, Box 17, San Luis Rey, Calif., U.S.A.
1942 BUXTON, J. LEAVESLEY, F.Z.S.; Brightlea, 227 Streetsbrook Road, Solihull, Birmingham.

1953 *CAFFERTY, Miss D. I.; 662 Wellington Avenue, Chicago 14, Ill., U.S.A.
1957 CALLEGARI, PIER-FRANCESCO; Via Barbiani 6, Ravenna, Italy.
1933 CAMPEY, A. D., B.E.M.; "Northlands," Hull Bridge Road, Beverley, E. Yorks.
1934 CAPRON, C. N.; 1020 South L. Street, Lake Worth, Florida, U.S.A.
1956 CAREY, R. J. P.; Dominion Museum, Wellington, New Zealand.
1954 CARLSSON, T.; Skolgatan 9, Malmberget, Sweden.
1956 CARPENTER, Mrs. B.; 2820 College Avenue, Berkeley 5, Calif., U.S.A.
1955 CARPENTIER, J.; Diepestraat 59, Antwerp, Belgium.
1918 CARR, PERCY; Ormond Lodge, Newbold-on-Stour, Nr. Stratford-on-Avon.
1952 CARR, W. H.; Murray Lodge, Newmarket, Suffolk.
1952 CARTHEW, W. R.; P.O. Box 49, Vereeniging, South Africa.
1950 CARTWRIGHT, K. G.; "The Gables," 10 Brick-Kiln Street, Quarry Bank, Nr. Brierley Hill, S. Staffs.
1954 CASTAN, Dr. R.; 16 Brd. Président Fallières, Gabès, Tunisie.
1953 CASTLE, D. F.; "Clive Cottage," Stockens Green, Knebworth, Herts.
1954 CHADWICK, J., F.Z.S.; Sewerby, Bridlington, E. Yorks.
1956 CHAMBERLAIN, Miss C. PEARL; Gt. Broadhurst Farm, Heathfield, Sussex.
1956 CHANNING, Mrs. Y., F.Z.S.; 14 Sycamore House, Maitland Park Villas, Hampstead, N.W. 3.
1932 *CHAPLIN, The Right Hon. the Viscount, F.L.S., F.Z.S., M.B.O.U.; Wadstray House, Blackawton, Nr. Totnes, Devon.

1957 CHATT, R. E. W. ; " Glendene," Surig Road, Canvey Island, Essex.
1951 CHEESMAN, M. R. ; 4888 South 1300 E, Salt Lake City 7, Utah, U.S.A.
1930 CHICHESTER, Mrs. H. G. ; Galgorm Castle, Ballymena, Co. Antrim, N. Ireland.
1956 CHILSTON, Viscount ; Chilston Park, Sandway, Nr. Maidstone, Kent.
1956 CHILVERS, W. ; Walmsley House, Hambleton, Selby, Yorks.
1957 CHOW, C. ; 601 Pedder Building, Hong Kong.
1957 CHRISTENSEN, DOUGLAS A., M.D. ; Kendrick, Idaho, U.S.A.
1914 CHRISTIE, Mrs. G. ; Kellas, By Elgin, Morayshire.
1957 CHURCH, Miss M. E. ; I.M. Marsh College of Physical Education, Barkhill Road, Aigburth, Liverpool 17.
1945 CLARENCE, Capt. A. A. ; 25 Elms Avenue, Parkstone, Dorset.
1957 CLARK, Major A. G. ; The Sherwood Foresters, 206 Maldon Road, Colchester, Essex.
1949 CLARK, G. T., " Maidsmere," Finstall, Bromsgrove, Worcs.
1942 CLARK, Mrs. G. T., F.Z.S. ; " Maidsmere," Finstall, Bromsgrove, Worcs.
1957 CLARKE, DARYLE ; 30 Sixth Avenue, New Norfolk, Tasmania, Australia.
1957 CLARKE, K. F. ; The Glebe House, Weston-under-Wetherley, Nr. Leamington Spa, Warwicks.
1957 CLAYDEN, A. E. ; 1 Westfield Terrace, Tadcaster, Yorks.
1953 CLAYDEN, Major C. N. ; The Middlesex Regt., H.Q. Eastern Command, Hounslow, Middx.
1957 CLAYDEN, Lt.-Col. H. W. ; Woodlands, Wyre Forest, Nr. Kidderminster, Worcs.
1952 CLAYTON, S. ; Heathfield, St. Philip's Road, Newmarket, Suffolk.
1950 CLAYTON, T. L. ; 75 Park Road, Hampton Hill, Middx.
1956 CLEAR, Professor VAL ; 303 Cottage Avenue, Anderson, Indiana, U.S.A.
1957 CLEGG, J. ; 135 Lower Mickletown, Methley, Nr. Leeds, Yorks.
1938 CLEMENTS, O. E., L.D.S., R.C.S.(Eng.) ; 1 Bayswater Road, Highlands, Salisbury, Southern Rhodesia.
1949 CLEMITSON, J. W. ; 25 St. Paul's Gardens, Whitley Bay, Northumberland.
1957 COBB, G. ; 59 Windmill Street, Whittlesey, Nr. Peterborough, Northants.
1957 COLLINGWOOD, R. N. ; 19 Wellwood Gardens, Morpeth, Northumberland.
1956 COLLINS, D. ; Bella Farm, Wharram, Malton, Yorks.
1956 COLLINS, Mrs. G. ; 9 Glen Almond Street, New Plymouth, New Zealand.
1957 CONRADIE, W. S. ; 29 Wellington Avenue, Sandringham, Johannesburg, South Africa.
1954 CONWAY, W. G. ; New York Zoological Society, Bronx Park, New York 60, N.Y., U.S.A.
1956 COOK, H. M. ; 62 Evans Street, Belmont, N.S.W., Australia.
1950 COOMBS, E. W., F.Z.S. ; " The Woodlands," Walderslade Road, Nr. Chatham, Kent.
1926 COOPER, Mrs. C. M. ; " Villa D'Este," Burges Road, Thorpe Bay, Essex.
1953 COOPER, Mrs. F. D. ; Dunstan Lodge, Churchdown, Gloucester.
1952 COOPER, J. T. ; Hall Farm, Outwell, Nr. Wisbech, Cambs.
1957 CORBETT, DAVID R. ; 3 Strathmore Gardens, Kensington, W. 8.
1951 CORBETT, R. C. U. ; Itchen Abbas Cottage, Nr. Winchester, Hants.
1956 CORBRIDGE, J., M.B.O.U. ; 47 Kenyon Lane, Moston, Manchester 10.
1953 CORLETT, JEROME ; Rt. 1—Box 878, Mobile, Alabama, U.S.A.
1942 CORWIN, SAUL C. ; 475 Crown Street, Brooklyn 25, New York, U.S.A.

1955 COSTA, Dr. C. FERNANDO ; Rua Dr. Antonio Martins No/11, Estoril, Portugal.

1957 COSTA, Dr. VICTOR ; Avenida Rio Branco, 4-8° andar, Rio de Janeiro, Brazil.

1956 COTT, TURLOUGH ; " The Shrubbery," Kilcock, Co. Kildare, Eire.

1926 COTTERELL, Lt.-Col. Sir RICHARD C., Bart. ; Garnons, Hereford.

1956 COWAN, JOHN C. ; 41 Birdwood Circus, Bicton, Western Australia.

1950 COWARD, D. M., F.Z.S. ; " Karibu," Longfellow Avenue, Wellsway, Bath.

1925 COWLEY, H. ; The Manor House, Bubbenhall, Nr. Coventry.

1947 COWLISHAW, A. G. ; The Chalet, 35 Aylesbury Street, Bletchley, Bucks.

1933 COX, Mrs. B., F.Z.S. ; Barncrosh, Castle Douglas, Scotland.

1956 COX, D. W. ; 32 Beamsley Road, Frizinghall, Shipley, Yorks.

1952 COYNE, Major S. F. ; The Sherwood Foresters, Normanton Barracks, Derby.

1956 CREED, C. W. G., F.Z.S. ; Dalhousie, 47 Gordon Avenue, Highams Park, London, E. 4.

1956 CROCKFORD, W. A. ; 67 Davenport Avenue, Hessle, E. Yorks.

1929 CROFTS, ROBERT T. ; 85 Reeves Avenue, Cross Heath, Newcastle, Staffs.

1949 CRONE, G. H. ; Jan Luykenstraat 16, Amsterdam, Holland.

1956 CROWE, R. W. ; Grey Tree, South Nutfield, Surrey.

1956 CULLEN, KEVIN J. ; 106 Duff Lane, Broken Hill, N.S.W., Australia.

1948 CUMMINGS, W. D., F.Z.S. ; The Keston Foreign Bird Farm, Ltd., Brambletye, Keston, Kent.

1952 CUNNINGHAM, A. M., F.Z.S. ; 21 Kitchener Road, East Finchley, London, N. 2.

1956 CURETON, J. ; Route 3, Cedar Lane Road, Greenville, South Carolina, U.S.A.

1957 CURL, WALTER S. ; Grand Junction Road, Myrtle Holmes, Adelaide, South Australia.

1955 CURLEWIS, Dr. B. WARREN ; 86 Crescent Road, Newport, N.S.W., Australia.

1957 CURRY-LINDAHL, Dr. KAI, M.B.O.U. ; Nordiska Museet and Skansen, Stockholm, Sweden.

1956 CURTIS, LAWRENCE ; Fort Worth Zoo and Aquarium, Fort Worth, Texas, U.S.A.

1939 DABNER, P. L. ; 56 Arkwright Road, Sanderstead, Surrey.

1946 DALBORG-JOHANSEN, J. ; Dyrlaege, Jernbanegade 6, Odense, Denmark.

1949 DALGETY, C. T., F.Z.S., M.B.O.U. ; Broomy Lodge, Linwood, Ringwood, Hants.

1948 DANHIER, M. F. ; 186 Chaussée de Charleroi, Brussels, Belgium.

1950 DARMAN, H. J., F.Z.S., F.R.H.S. ; 44 Fraser Road, Walthamstow, London, E. 17.

1932 DARNTON, Mrs. I., M.B.O.U. ; Sissinghurst Court, Cranbrook, Kent.

1956 DARNTON, R. E. ; Sissinghurst Court, Cranbrook, Kent.

1956 DAUNCEY, A. N. ; 123 Ridgeway, Edgbaston, Birmingham 17.

1956 DAVEY, H. ; 3 The Crescent, Lower Willingdon, Nr. Eastbourne, Sussex.

1957 DAVIDSON, L. R. ; 71 College Bounds, Fraserburgh, Aberdeenshire.

1956 DAVIES, Dr. D. H. ; Institute of Marine Resources, University of California, P.O. Box 109, La Jolla, Calif., U.S.A.

1954 DAVIES, G. C. N. ; P.O. Box 1155, Lourenço Marques, Portuguese East Africa.

1927 DAVIS, Sir GODFREY, I.C.S., F.Z.S. ; Beresfords, Boughton Monchelsea, Nr. Maidstone, Kent.

1956 DAY, J. ; 7 Fitzilian Avenue, Oak Road, Harold Wood, Essex.
1950 DAY, J. N. E., M.Sc., Ph.D. ; 18 Homewood Road, St. Albans, Herts.
1952 DEACON, D. R. ; 41 Hilders Road, Western Park, Leicester.
1951 DEAN, A. W. S. ; Sudbrook Manor, Sudbrook, Grantham, Lincs.
1956 DEANE, R. S. W. ; c/o Utilities Dept., T.T.O.C., Pointe-à-Pierre, Trinidad, B.W.I.
1952 DEANS, G., F.R.Z.S.(Scot.) ; 3 New Edinburgh Road, Dalkeith, Midlothian.
1953 D'EATH, J. O., F.Z.S. ; The Grove, Hadley, Barnet, Herts.
1953 DE BEAUMONT, Mrs. G. ; Blairlogie House, Menstrie, Clackmannanshire, Scotland.
1954 DE CARVALHO MONTEIRO, A. ; Praça dos Restauradores 13-2° D., Lisbon, Portugal.
1917 DECOUX, A. ; Géry, Aixe-sur-Vienne, Haute-Vienne, France.
1958 DEEGAN, F. H., D.C. ; 9445 Hobart Street, Dallas 18, Texas, U.S.A.
1948 DE GOEDEREN, G. ; Orteliuskade 74, Amsterdam-W, Holland.
1957 DE JONG, J. ; Lijsterlaan 51, Vlaardingen, Holland.
1957 DEMPSEY, JOHN ; P.O. Box 1725, Salisbury, Southern Rhodesia.
1903** DENNIS, Mrs. H. E. ; Lower Nash, Nutbourne, Pulborough, Sussex.
1924 DENNY, Mrs. H., C.B.E., J.P., F.Z.S. ; The Chantry, Horsham, Sussex.
1930 DE PASS, GERALD V., F.Z.S. ; The Old Kennels, Satwell, Nr. Henley-on-Thames.
1932 DE PLEDGE, Miss BERYL ISABEL, F.Z.S. ; 9 Beaufort House, Beaufort Street, Chelsea, London, S.W. 3.
1956 DE ROECK, A. ; 58 Avenue Arthur Goemaere, Antwerp, Belgium.
1948 DESAI, PRADYUMAN K. ; Takhteshwar Plot, Bhavnagar, Saurashtra, India.
1957 DE SOUZA, Mrs. ADDIE COSTA BIR ; P.O. Box 1264, Mombasa, Kenya Colony.
1956 DEWHURST, Miss S. ; Dungarthill, Dunkeld, Perthshire, Scotland.
1945 DEXTER, J. E., M.M. ; Mansdale, Calvert Road, Dorking, Surrey.
1957 DICK, JOHN R. ; 909 Westridge Road, Greensboro, N.C., U.S.A.
1951 DIEDRICH, W. W. ; Koningin Wilhelminalaan 354, Voorburg, Holland.
1955 DIERCXSENS, LOUIS ; Président, Société Royale de Zoologie d'Anvers, 26 Place Reine Astrid, Antwerp, Belgium.
1954 DIGBY, J. M. T. ; 50 Cressingham Road, Burnt Oak Estate, Edgware, Middx.
1955 DIGGLE, A. ; 10 Cross Hill Street, High Crompton, Shaw, Nr. Oldham, Lancs.
1955 DILGER, Professor W. C., Ph.D. ; Laboratory of Ornithology, Cornell University, Ithaca, New York, U.S.A.
1958 DINEEN, Mrs. D. E. ; 145 High Street, Colliers Wood, London, S.W. 19.
1953 DOLTON, K. W. ; Sundown, Oakleigh Avenue, Hallow, Worcester.
1954 DOMINGUEZ, Dr. R. H. ; Box 248, Utuado, Puerto Rico.
1924 *DOOLY, THOMAS L. S. ; Whimbrel, Kirklake Road, Formby, Nr. Liverpool.
1955 DÖPFER, Frau ERIKA ; Hercules Strasse 8, Kassel, Germany.
1953 DOSSCHE, ARM. ; Toekomststr. 38, St. Amandsberg-Ghent, Belgium.
1955 DOUETIL, B. N. ; " Chalfont," Wayneflete Tower Ave., Esher, Surrey.
1957 DOUGLAS, GEORGE A. ; 172 Stamford Street, North Rockhampton, Queensland, Australia.
1956 DRAPER, M. F. ; " Wessex," Dummer, Basingstoke, Hampshire.
1947 DRING, W. T., F.Z.S. ; 12 East Park Street, Chatteris, Cambs.
1953 DRING, Mrs. W. T., F.Z.S. ; 12 East Park Street, Chatteris, Cambs.
1955 DRIVER, H. L., F.Z.S. ; 64 Laburnham Road, Biggleswade, Beds.
1957 DROHAN, RONALD J. ; 366 South Road, Glandore, South Australia.

1957 DUFFERIN AND AVA, The Marchioness of; 4 Hans Crescent, London, S.W. 1.
1947 DUFOUR, Colonel JOHN; 167 Avenue de Belgique, Antwerp, Belgium.
1954 DUFTY, J. H., J.P.; Post Office, Aberdare 3. N., via Cessnock, N.S.W., Australia.
1939 DULANTY, BRIAN H., F.Z.S.; Fisheries Cottage, Chorley Wood, Herts.
1957 DUN, J. M.; Craigellachie, Galashiels.
1922 DUNMORE, Oscar E., F.Z.S.; 31 Mickleton Drive, Evington, Leicester.
1930 DUNSTER, Capt. J. E.; Bucklebury Village, Nr Reading, Berks.
1956 DUPONT, A.; 25 Ermitage, Wavre, Belgium.
1927 DUYZEND, P.; Koppeldijk 24, Huize, "Casarca," Zeist, Holland.

1954 EASTMAN, J. G.; Reedlings (Bird Reserve), Newdigate, Dorking, Surrey.
1936 EAVES, W. L., F.Z.S.; 581 Warwick Road, Solihull, Birmingham.
1958 EDWARDS, K. W.; 14 Lake Road, Keswick, Cumberland.
1957 EDWARDS, Mrs. R. D.; RFD, McClellanville, S.C., U.S.A.
1954 EGAN, E.; 16 Tewkesbury Avenue, Droylsden, Nr. Manchester.
1958 ELISCU, JULIETTE M., M.D.; 727 N. Pearl Street, Joplin, Missouri, U.S.A.
1955 ELLIS, C. W.; Corsham Court, Corsham, Wilts.
1957 ELLIS, M. W.; 60 Buckmaster House, Holloway Road, London, N. 7.
1949 *ENEHJELM, C. H. F. AF, C.M.Z.S.; Högholmens Djurgård, Helsingfors, Finland.
1935 ENGELBACH, Dr. PIERRE; 10 Rue Copernic, Paris (16e), France.
1955 ESSON, Mrs. M. D.; 3 Western Avenue, Gidea Park, Romford, Essex.
1950 EVANS, F. J., F.Z.S.; 51 Brunswick Road, Leyton, London, E. 10.
1929 EVANS, Miss JOAN; Townsend, Middle Wallop, Hants.
1955 EVERITT, Sqd.-Ldr. C.; 5 Brooklyn Grove, South Norwood, London, S.E. 25.
1955 EVERITT, Mrs. C. M.; 5 Brooklyn Grove, South Norwood, London, S.E. 25.
1956 EZRA, Miss RUTH M.; Chestnut Lodge, Old Common, Cobham, Surrey.

1955 FAIRBARNS, ANDREW; The Round Hill, South Benfleet, Essex.
1949 FANCUTT, FRANK, F.Z.S.; 86 Linden Drive, Alvaston, Derby.
1957 FARMER, H. W.; 328 McCrae Street, Bendigo, Victoria, Australia.
1946 FAUDELL, C. L.; 45 Dickason Road, Heathmont, Ringwood, Victoria, Australia.
1957 FERNEBACH, S.; 32 Powell Road, Allendale, New Jersey, U.S.A.
1951 FIELD, Mrs. B.; Whitebrook, Widbrook Common, Cookham, Berks.
1956 FIELDING, J. A.; 66 Howard Avenue, Bexley, Kent.
1950 FIERLAFIJN, J.; Karel Oomstraat 24, Antwerp, Belgium.
1953 FINCH, Colonel H. B., M.C.; "Revesby," Hutton Road, Ash Vale, Nr. Aldershot, Hants.
1954 FINDLAY, Major J., D.S.O., F.R.Z.S.(Scot.); "Cosie Brae," West Cults, Aberdeenshire.
1952 FIORAVANTI, The Marquis; Bellosguardo 14, Florence, Italy.
1957 FITZ, ARTHUR E.; 1450 Washington Hgts., Ann Arbor, Michigan, U.S.A.
1958 FLAVEL, LINDSAY M.; Kingston, S.E., South Australia.
1956 FLETCHER, A. W. E.; 136 Chester Road, Helsby, Cheshire.
1956 FLINTOFT, Mrs. J. W.; Box 727, Issaquah, Washington, U.S.A.
1948 FOGG, H.; 190 Station Road, Wylde Green, Sutton Coldfield, Nr. Birmingham.
1925 FOOKS, F. E.; Clères, Seine Inférieure, France.

1932 Fooks, H. A. ; Grizedale Lodge, Hawkshead, By Ambleside, Westmorland.
1951 Ford, J. ; 186 Woolwich Church Street, Woolwich, London, S.E. 18.
1957 Foster, Miss E. V. R. ; Market Street, Lurgan, Co. Armagh, N. Ireland.
1953 Foster, P. ; 72 Stockport Road, Cheadle Heath, Stockport, Cheshire.
1951 Fothergill, Miss S. A., F.Z.S. ; 8 Whitelands House, Sloane Square, London, S.W. 3.
1953 Frampton, P. ; 53 Brunker Road, Broadmeadow, N.S.W., Australia.
1958 Francis, A. W. ; 49*a* Tisbury Road, Basement Flat, Hove, Sussex.
1954 Franks, D. C. ; Argyll, 75 Old Road, Harlow, Essex.
1957 Fraser, A. J. ; Chief Warden of Fauna, Fisheries Dept., 108 Adelaide Terrace, Perth, Western Australia.
1933 Frayne, Ralph ; 50 Cantley Lane, Bessacarr, Doncaster.
1957 Frost, C. M. ; 25th Floor, Esperson Bldg., Houston 2, Texas, U.S.A.
1950 Frost, R. ; 48 Station Road, Brimington, Chesterfield.
1908** Frost, Wilfred J. C. ; c/o Zoological Society of London, Regent's Park, London, N.W. 1.
1947 Frostick, W. B., M.B.O.U. ; 26 Minster Precincts, Peterborough, Northants.
1957 Fryer, E. ; 58 Stroud Road, Gloucester.
1957 Fulton, R. A. ; 99 John Street, New York 38, N.Y., U.S.A.
1929 Furner, A. C. ; Oakdene, 115 Whitaker Road, Derby.

1950 Gadd, J. A. ; 75 Holly Road, Aldershot, Hants.
1948 Galland, John F. ; 197 Fraser Street, Howick, Pietermaritzburg, Natal, South Africa.
1957 Gammage, W. G. ; 5 Glenavon Road, Ipswich, Suffolk.
1956 Ganner, Miss E. G. ; 149 Holland Park Avenue, London, W. 11.
1956 Gardiner, H. ; Great Wasketts, Gardiner's Lane, Crays Hill, Billericay, Essex.
1941 Gardner, A. H. ; 21 Kingsland Road, Strathfield, Sydney, N.S.W., Australia.
1956 Garner, J. F. ; The Cabin, Far Street, Bradmore, Nottingham.
1951 Garner, R. ; 1 Arno Vale Gardens, Woodthorpe, Nottingham.
1951 Garratt, J. C. ; " Crossways," Sea Avenue, Rustington, Sussex.
1957 Garwood, Ray S. ; Winkie, River Murray, South Australia.
1949 Gary, F. L. ; Earlham, Columbus, New Jersey, U.S.A.
1950 Gask, Miss D., F.Z.S. ; "Twa Noon," Lincoln Road, Chalfont-St.-Peter, Bucks.
1956 Gaved, P. H. ; 1 Linden Cottages, High Street, Yatton, Nr. Bristol.
1956 Geary, R. ; School Cottage, Anslow, Burton-on-Trent, Staffs.
1957 Geddes, W. ; 50 Glover Street, Redditch, Worcs.
1948 Geertsema, Lt.-Colonel C. C. ; Soestdijk Palace, Baarn, Holland.
1950 Gemmill, John ; Aikenhead, Kilmarnock, Ayrshire.
1956 Gent, Mrs. O. L. ; 88 High Street, Berkhamsted, Herts.
1948 *Gerard, Lord, F.Z.S., M.B.O.U. ; Blakesware, Ware, Herts.
1956 Gerrits, H. A. ; 667 Rijksstraatweg, Wassenaar, Holland.
1957 Gibbs, John R., M.R.C.V.S. ; P.O. Box 22, Morota, Karamoja, Uganda.
1950 Gilbert, W. O., F.Z.S. ; 31 Douglas Road, Luton, Beds.
1950 Gilbert, Mrs. W. O., F.Z.S. ; 31 Douglas Road, Luton, Beds.
1948 Gill, J. M. ; Kahfax, Station Approach, South Ruislip, Middx.
1953 Gillan, A. ; 66 Broomhill Road, Aberdeen, Scotland.
1946 Gillen, John ; Ballycraigy, Ballymena, Co. Antrim, N. Ireland.
1955 Gillmor, R. A. F. ; 58 Northcourt Avenue, Reading, Berks.

1955 GILMOUR, E. F., A.M.A., M.S.B.E. ; Director, Doncaster Museum and Art Gallery, Waterdale, Doncaster.

1956 GINN, JAMES F. ; 451 Metropolitan Pl. S.E., Atlanta 16, Georgia, U.S A.

1953 GJESSING, G. A. ; " Woodberry Hill," Konnerud, Drammen, Norway.

1956 GLASS, W. G. ; 25 Olympia Hill, Morpeth, Northumberland.

1956 *GLEADOW, Dr. E. F. ; The Mill House, Farningham, Kent.

1928 GLENISTER, A. G., C.B.E., F.Z.S., M.B.O.U. ; The Barn House, East Blatchington, Seaford, Sussex.

1931 GLOVER, P. H., F.Z.S. ; Isa Lei, 2 Round Hill Road, Livermead, Torquay, Devon.

1953 GLOVER, P. J. ; c/o The Old Clergy House, Cornwood, Ivybridge, Devon.

1950 GODWIN, J. H. ; " Cherry Dell," Alderton Drive, Ashridge Park, Berkhamsted, Herts.

1950 GOETZ, L. DALE ; 3116 N. Ernst Street, Franklin Park, Illinois, U.S.A.

1950 GOMM, F. A. ; The Cave, Amersham Road, Hazlemere, High Wycombe, Bucks.

1953 GOOD, Mrs. E. H. ; Buckland Fields, Lymington, Hants.

1957 GOODBRAND, Mrs. J. S. ; P.O. Box 610, Duncan, British Columbia, Canada.

1945 GOODWIN, DEREK, M.B.O.U. ; c/o Bird Room, British Museum (Natural History), Cromwell Road, London, S.W. 7.

1956 GOOLD, S. E. ; P.O. Box, 49, Devonport, Tasmania, Australia.

1945 GORDON, Mrs. BEATRICE HOOD CLAESON, F.Z.S. ; Cluny Castle, Monymusk, Aberdeen.

1951 GORDON, W. H., Jr. ; 4412 West Sixteenth Street, Lubbock, Texas, U.S.A.

1956 GORDON, W. O. ; 160 Wantirna Road, Ringwood, Victoria, Australia.

1954 GRAHAM, G. ; 56 Market Square, Duns, Berwickshire.

1956 GRAHAM, ROBERT C. ; June Road, Stamford, Conn., U.S.A.

1935 GRANT, FRANK ; Parklands, Stoughton Lane, Evington, Leicester.

1953 GRANTHAM, R. H. ; 13 St. Wilfrids Road, New Barnet, Herts.

1956 GRASSBY, J., F.R.H.S. ; " The Glen," Mobberley, Nr. Knutsford, Cheshire.

1956 GRAVEM, NICHOLAS, Jr. ; 200 Elm Avenue, Mill Valley, Calif., U.S.A.

1951 GRAY, J., A.R.I.B.A. ; " Braemar," Dryburn Road, Durham Moor, Durham.

1957 GREEN, ERNEST W. ; 39 Bowen Street, Levin, New Zealand.

1957 GREEN, F. A. ; The Pyket, Church Lane, Little Billing, Northampton.

1956 GREENHALGH, J. H. ; " Broadlands," Springbrook Lane, Earlswood, Warwicks.

1956 GREENSHIELDS, A. E. ; 50 Blight Street, Croydon, S. Australia.

1954 GREENWAY, K. W. ; " High Bank," Heath Road, Bladon, Oxford.

1952 GREGORY, J. J. ; 66 Carew Road, Hamden, Conn., U.S.A.

1954 GRELLIER, Mrs. R. ; Swindon Hall Farm, Swindon Village, Cheltenham.

1954 GREWCOCK, K. R. E. ; 36 Station Road, Marston Green, Nr. Birmingham.

1952 GRICE, H. ; Mount Pleasant, Hanging Grimston, Kirby Underdale, York.

1953 GRIFFITHS, A. V., F.Z.S., M.R.C.V.S. ; Dol-llan, Llandyssul, Cards.

1946 GRIFFITHS, WILLIAM ; 19 Ethelbert Road, Wimbledon, London, S.W. 20.

1956 GRIMSHAW, H. G. ; The Ram Inn, The Rushes, Loughborough, Leicester.

1947 *GRISWOLD, JOHN A. ; The Zoological Society of Philadelphia, 34th Street and Girard Avenue, Philadelphia 4, Pa., U.S.A.

1956 GRISWOLD, Professor OLIVER ; 4273 Ingraham Highway, Miami 33, Florida, U.S.A.

1956 GROEN, Dr. H. D. ; Rijksweg 252, Haren Gr., Holland.

1957 GROOM, CHARLES W. Jr. ; 34 Samuel Street, Peakhurst, Sydney, N.S.W. Australia.
1951 GROUND, W. J. ; " Albion House," 61 Pinchbeck Road, Spalding, Lincs.
1917 GROVES, Hon. Mrs. McGAREL ; Battramsley House, Lymington, Hants.
1951 GRUBER, H. F., F.R.Z.S. (Scot.) ; 9 Churchill, Morningside, Edinburgh 10,
1951 GUDMUNDSSON, Dr. F., M.B.O.U. ; Museum of Natural History, P.O. Box 532, Reykjavik, Iceland.
1947 GULLIVER, V. S. ; 33 Vale Road, Aylesbury, Bucks.
1957 GUNDERSON, J. H. ; Dos Pueblos Ranch, RFD 1, Goleta, Calif., U.S.A.
1927 GURNEY, Miss DIANA ; North Runcton Hall, King's Lynn.
1956 GUTHRIE, JAMES K. ; 3150 Valencia Avenue, San Bernardino, Calif., U.S.A.
1942 GUY, CHARLES P. ; Lamorna Bird Farm, Combe-in-Teignhead, Newton Abbot, S. Devon.
1957 GWYNNE-EVANS, Mrs. B. M. ; 6 Eldon Road, London, W. 8.

1939 HADDEN, NORMAN G. ; Underway, West Porlock, Somerset.
1956 HADDOW, A. M. ; 23 Riverview Street, South Perth, Western Australia.
1952 HADLOW, L. A. ; Barbary Farm, Norton, Faversham, Kent.
1956 HAFIDH, ABDULILAH, Governor of the Central Bank of Iraq, Baghdad, Iraq.
1956 HAGAN, Miss MARY ; Lismara, Whiteabbey, Belfast, N. Ireland.
1951 HAITH, J. E. ; Park Street, Cleethorpes, Lincs.
1948 HALE, O. ; Laithfield, Digswell, Welwyn, Herts.
1955 HALL, D. B. ; 3 Rowdeford Cottages, St. Edith's Marsh, Bromham, Wilts.
1955 HALL, W. C. ; Arden House, 8 Randolph Road, London, W. 9.
1957 HALLORAN, R. ; 42 Parliament Street, Derby.
1956 HALL-SMITH, Mrs. E. D. ; Deacons Hay, Chelwood Gate, Nr. Haywards Heath, Sussex.
1937 HALVERSON, A. W. ; 5705 West Erie Street, Chicago 44, Ill., U.S.A.
1946 HANSEN, PAUL ; Gormsgade 3, I. Sal, Odense, Denmark.
1952 HANSEN, SVEND T. ; Ny Skelgaardsvej 21, Kastrup, Amager, Denmark.
1957 HARDING, JOHN ; 7424 Phillips Avenue, Chicago 49, Ill., U.S.A.
1956 HARGRAVE, KEITH ; 28 Branson Avenue, Enfield Extension, Clearview, South Australia.
1954 HARGREAVES, J. E. ; 256 Upper Batley Lane, Batley, Yorks.
1949 HARMAN, H. J. ; 10 Haydon Road, Dagenham, Essex.
1954 *HARMON, T. D. ; 3601 W.-102 Street, Inglewood 2, Calif., U.S.A.
1954 HARRAP, K. S. ; Box 8228, Belmont, Bulawayo, Southern Rhodesia, South Africa.
1950 *HARRIS, A. J., Jr. ; Rte. 1—Box 24, Pendleton, Virginia, U.S.A.
1951 HARRIS, Mrs. E. ; 11 Prince Albert Street, Dudley, Worcs.
1956 HARRIS, J. E. ; Wood Lawn, Uttoxeter, Staffs.
1956 HARRISON, J. F. ; Front Street, Haswell Moor, Haswell, Co. Durham.
1956 HARRISON, J. G., M.A., M.B., M.R.C.S., M.B.O.U. ; " Merriewood," St. Botolph's Road, Sevenoaks, Kent.
1957 HARRISON, JAMES M., D.S.C., M.R.C.S., L.R.C.P., F.Z.S., M.B.O.U. ; Bowerwood House, St. Botolph's Road, Sevenoaks, Kent.
1957 HARRISON, R. I. ; 165 Southfield Road, Middlesbrough, Yorks.
1956 HARTSHORNE, JAMES M. ; The Laboratory of Ornithology, Cornell University, Ithaca, New York, U.S.A.
1945 HARVEY, ARTHUR W. H. ; Rydal, Long Rock, Penzance, Cornwall.
1955 HARWOOD, P. ; Glebe Road, Darlington, Western Australia.
1957 HASLER, G. E. ; 62 Lindsworth Road, Kings Norton, Birmingham 30.

1930 HASTINGS, P. H. ; 182 Sultan Road, Landport, Portsmouth.
1952 HAWKE, E. H. ; Box 796, Lourenco Marques, Portuguese East Africa.
1956 HAWKINS, ROLAND W. ; Conservatory-Aviary, West Park, Pittsburgh 12, Pa., U.S.A.
1953 *HAWLEY, W. M. ; 703-15th Avenue, New Westminster, B.C., Canada.
1956 HAWORTH, C. T. ; Old Falinge, Rochdale, Lancs.
1946 HAYWARD, Mrs. D. A. ; Invermay, Highland Avenue, Brentwood, Essex.
1950 HEARD, A. C. ; The Cedars, Baschurch, Shrewsbury.
1947 HEATH, R. E., B.A., M.B.O.U. ; 2 Pembroke Court, Edwardes Square, London, W. 8.
1957 HEATLEY, Mrs. SEYMOUR ; Churchtown House, Churchtown, Dundrum, Co. Dublin, Eire.
1957 HEAYSMAN, R. P. ; Heathfield, South Australia.
1955 HEDIGER, Professor Dr. H. ; Zoologischer Garten, Zurich, Switzerland.
1952 HEMPSTED, H. J. ; 2 New Houses, Bacton Road, North Walsham, Norfolk.
1957 HENDERSON, RODNEY ; Barmera, South Australia.
1952 *HENDERSON, W. B. ; Viewfield House, Bankfoot, Perthshire.
1957 HENLEY, C. ; Riverhead Farm, Market Weighton, York.
1957 HENNIKER-MAJOR, The Hon. JOHN ; Petleys, Downe, Kent.
1956 HENRY, Rev. B. C. R. ; B.M.S. Station, Udayagiri, Ganjam District, Orissa State, India.
1945 HENRY, B. R., M.B., B.Ch., D.P.H., J.P. ; Four Winds, Comber, Belfast, N. Ireland.
1952 HENRY, G. M. ; " Ainsgarth," Fore Street, Constantine, Falmouth.
1955 HESLOP, H. J. ; Witton Lodge, Simonstone, Nr. Burnley.
1956 HESSEY, M. ; Keepers' Lodge, Zoological Society of London, Regent's Park, London, N.W. 1.
1958 HIGGINBOTTOM, J. ; Belle Vue Zoological Gardens, Manchester 12, Lancs.
1956 HIGGINSON, A. H. ; Stinsford House, Dorchester, Dorset.
1957 HILL, L. W. ; " Birdland," Bourton-on-the-Water, Glos.
1939 HILL, W. C. OSMAN, M.D., Ch.B., F.L.S., F.Z.S. ; Lancaster House, Prince Albert Road, London, N.W. 8.
1945 HINDLE, E., M.A., Sc.D., Ph.D., F.R.S., F.L.S., F.Z.S. ; The Athenaeum, Pall Mall, London, S.W. 1.
1926 HIRST, ROBERT S., F.Z.S. ; Swincliffe House, Gomersal, Nr. Leeds.
1954 HOBDAY, Miss S. I. ; 149 Holland Park Avenue, London, W. 11.
1947 HODGES, J. R., Ph.D., F.Z.S. ; 23 Ashridge Gardens, Pinner, Middlesex.
1956 HODGSON, FRANK J. ; 30 Hobart Avenue, East Lindfield, Sydney, N.S.W., Australia.
1957 HOFFMAN, LESTER ; 1322 S. Mountain Avenue, Duarte, Calif., U.S.A.
1955 *HOFFMANN, L. ; Tour du Valat, par Le Sambuc, B.D.Rh., France.
1956 HOLBERRY, F. H. ; 29 Alvan Street, Higher Openshaw, Manchester 11.
1956 HOLLAND, H. ; Stamford Park (Joint) Committee, Stalybridge, Cheshire.
1922 HOLLAS, Mrs. K. E., F.Z.S. ; Hothersall Hall, Ribchester, Nr. Preston, Lancs.
1930 *HOLLOND, Miss GLADYS M. B. ; Great Ashfield House, Bury St. Edmunds, Suffolk.
1951 HOLM, BJÖRN ; Kyrkogatan 5, Kiruna, Sweden.
1957 HOOD, Mrs. RUBY P. ; 575 Cypress Avenue, Colton, Calif., U.S.A.
1954 HOOPER, S. F. ; 35 Frederick Terrace, Wisbech, Cambs.
1951** HOPKINSON, Miss E. M. ; " Wynstay," Balcombe, Nr. Haywards Heath, Sussex.
1928 HORNE, DOUGLAS PERCY ; Lloyds, Leadenhall Street, London, E.C. 3.

1956 HORSHAM, RONALD J. E., F.Z.S., M.I.A.; Box 3456 Cape Town, South Africa.
1954 HOSKINS, N.; The Cottage, Park Road East, Uxbridge, Middx.
1934 HOUSDEN, Major E. F., M.C., T.D., M.A., F.Z.S.; 126 Bessborough Road, Harrow.
1948 HOUSDEN, EDWIN J. T., B.A.; Senanga, Barotseland Protectorate, Northern Rhodesia.
1933 HOUSDEN, LESLIE, O.B.E., M.D.; Roundhead Cottage, Old Basing, Basingstoke, Hants.
1942 HOVELL, S.; 29 Woad Lane, Long Sutton, Spalding, Lincs.
1956 HOWELL, J. Z.; Aberdeen and Pembroke Roads, Saint Davids, Pennsylvania, U.S.A.
1958 HUBBARD, R. A.; 5 Manor Way, Boreham Wood, Herts.
1957 HUBBELL, Mrs. RUSSELL; 3521 Chamoune, San Diego 5, Calif., U.S.A.
1952 HUDDART, B. J., F.Z.S., M.B.O.U.; Shirley House, Marsh Lane, Taplow, Bucks.
1956 HUEBNER, H. B.; Route 4, Box 420, Niles, Michigan, U.S.A.
1950 HUGHES, N. D.; 1 High Street, Hampton Hill, Middx.
1956 HUGHES, P.; Furneaux Pelham Hall, Buntingford, Herts.
1956 HUGHES, Mrs. ROSE; 928 Teetshorn Street, Houston 9, Texas, U.S.A.
1957 HULBEY, P.; 34 Divine Road, Milton Park, Salisbury, Southern Rhodesia.
1957 HUNT, A. C.; "Culwulla," Private Bag, Inverell, N.S.W., Australia.
1953 HUNT, W. G.; 26 Middle Street, Brixham, Devon.
1939 HURLBURT, Dr. W. E.; Vineland, Ontario, Canada.
1930 HUTCHINSON, G. ROWLAND; 736 Remuera Road, Auckland, New Zealand.
1947 HUYTON, A. E.; 55 Victoria Road, Great Crosby, Liverpool 23.
1956 HYDE, D. O.; Yamsay Ranch, Chiloquin, Oregon, U.S.A.
1957 HYLAND, D. E.; P.O. Box 5, Ficksburg, O.F.S., South Africa.
1957 HYND, A. R.; 1 Wauchope Place, Langholm, Dumfriesshire, Scotland.
1956 HYNDMAN, IAN V.; 353 Lower Heidelberg Road, East Ivanhoe N. 21., Melbourne, Victoria, Australia.

1940 *ILES, GERALD T., F.Z.S.; c/o 3819 Avenue Calixa-Lavallée, Montreal, Canada.
1939 INDGE, H. J., F.Z.S.; Trimstone, Thorpe, Surrey.
1953 INGLIS, J. F., F.R.Z.S.(Scot.); The Vale Hotel, Alford, Aberdeenshire.
1954 INGRAM, Mrs. P.; 46c Edwardes Square, London, W. 8.
1948 IRVING, G. J.; 2 Grove Road, Egremont, Cumberland.
1952 *ISAKSON, Dr. E. W.; 168 West 12th Street, Ogden, Utah, U.S.A.
1926 ISENBERG, A. H.; 451 Portola Road, Portola Valley, California, U.S.A.

1955 JACK, ANTHONY; Avenida da Liberdade 192, Lisbon, Portugal.
1957 JAMES, ARTHUR BADEN ST. CLAIR; 471 Station Street, Carrum, Melbourne, Victoria, Australia.
1956 JANSSEN, P. J. C. G.; Strijpsestraat 74, Eindhoven, Holland.
1953 JASAWALLA, C. M.; "Hill Crest," 14 Salisbury Park, Poona, India.
1947 *JASDAN, Y. S. SHIVRAJKHACHAR OF; The Palace, Jasdan, (Saurashtra), India.
1957 JEFFS, J. H., F.Z.S.; Green Gables, 2 Church Road, Alsagar, Stoke-on-Trent.
1956 JERSEY, The Earl of; Radier, Longueville, Jersey, Channel Islands.
1956 JEWELL, A.; 54 Oxford Road, Burford, Oxfordshire.
1958 JINADASA, G. P.; 44 Kandy Road, Gampola, C.P., Ceylon.

1952 JOHNSON, F. E. B., F.Z.S.; "Willow Close," Mill Lane, Hulcote, Bletchley, Bucks.
1951 JOHNSTONE, S. T.; The Wildfowl Trust, The New Grounds, Slimbridge, Glos.
1956 JOLLEY, I. B.; Olney, Bucks.
1949 JONES, C. G.; 8416 Midland Road, Bellevue, Washington, U.S.A.
1956 JONES, D. G.; 7 Cambrian Road, Richmond, Surrey.
1933 JONES, F. TERRY, F.Z.S.; Leckford Abbas, Stockbridge, Hants.
1934 JONES, S. B.; Five Oaks, 97 Liverpool Road, Lydiate, Lancs.
1950 JONES, Major V. DILWYN, M.B.E., M.M., T.D.; "Sherwood," Grosvenor Road, Llandrindod Wells, Radnor.
1957 JORGENSEN, C. W.; 10530 La Lunitas, Tujunga, Calif., U.S.A.
1956 JOSEPH, Miss S. R.; 51 Tudor Close, Brixton Hill, London, S.W. 2.

1956 KADEL, Mrs. M.; "Pamaroo," Roma, Queensland, Australia.
1955 KAGAWA, MITAMI; Ritsurin Park Zoo, Takamatsu City, Kagawa-Ken, Japan.
1957 KEATS, P. A.; 5 Station Road, Kirby Muxloe, Leicestershire.
1957 KEIGHTLEY, J. B.; P.O. Glendale, Southern Rhodesia.
1951 KELLOGG, Mrs. F. M.; 955 Park Avenue, New York 28, U.S.A.
1956 KELTY, DONALD W.; Box 307, Hamilton, Victoria, Australia.
1953 KENDALL, S. B., Ph.D., B.Sc., M.R.C.V.S., A.R.C.S., F.Z.S.; Weir Cottage, Bridge Road, Chertsey, Surrey.
1955 KENNEDY, D.; Quitman, Georgia, U.S.A.
1957 KEOGH, P. J.; 17 Woodstock Road, Thurcaston Road, Leicester.
1957 KERN, W. R.; P.O. Box 848, Monterey Park, Calif., U.S.A.
1927 KERR, J. E.; Harviestoun, Dollar, Scotland.
1955 KILLICK, B. M.; "Sandhome," Raunds, Wellingborough, Northants.
1956 KING, F. H.; 53 Westfields, Road, Corby, Northants.
1938 KING, H. T.; Flat B, 36 Magdala Road, Mapperley Park, Nottingham.
1957 KING, J. R. W.; The Mill School, Lyminge, Folkestone, Kent.
1953 KINGSLAND, W. F.; Hill-and-Dale, Redding, Connecticut, U.S.A.
1956 KINGSTON, J.; "Berwyn," Bilston Road, Willenhall, Staffs.
1936 *KINSEY, ERIC C.; 17 Southwood Avenue, Ross, Calif., U.S.A.
1950 KIRK, KEITH C.; 54 Station Road, Sutton-in-Ashfield, Notts.
1953 KIRK, R. S., M.B., F.Z.S.; 3 Park Crescent, London, W. 1.
1948 KIRKALDY, Mrs. M., F.Z.S.; The Grove, Warley Mount, Brentwood, Essex.
1952 KIRKHAM, R. G.; "The Gables," Wynnsward Park, Clonskeagh, Co. Dublin, Eire.
1957 KJELLAND, ERLING G.; 1728 N. Sedgewick, Chicago 14, Ill., U.S.A.
1956 KLENK, ARTHUR J.; Doolette Road, Spearwood, Western Australia.
1954 KLÖVEKORN, WERNER; Pfalzdorferstrasse 61, (22A) Goch/Rhld, Western Germany.
1928 KNOBEL-HARMAN, Miss M. H., F.Z.S.; 19 Connaught Square, London, W.2.
1954 KRAUS, F.; Neuried 1, München 49, Germany.
1955 KREUGER, R.; Stockholmsgatan 17, Helsingfors, Finland.
1957 KUFFALL, Mrs. M. T.; 2 The Drive, Mardley Hill, Welwyn, Herts.
1954 KYME, R. T.; 30 King Street, Kirton, Nr. Boston, Lincs.

1947 LABDON, B.; Millberne, Cullompton, Devon.
1957 LABRUM, V. P.; "Labrani," 28 Borrowcop Lane, Lichfield, Staffs.
1929 LAIDLAY, J. C.; Holmwood, Perth, Scotland.

1951 LAKE, F. B., M.R.C.S., L.R.C.P., F.Z.S.; The White House, 5 Portsmouth Road, Kingston-on-Thames.
1937 LAKE, GEORGE D., M.B.O.U.; Audreys, Burghfield Common, Reading, Berks.
1945 LAMB, A.; Mount Pleasant, Hexham, Northumberland.
1957 LAMBERT, A. J.; 1 Beechcroft Close, Sunninghill, Ascot, Berks.
1957 LAMM, HAROLD; Curator of Birds, Cleveland Zoological Park, Cleveland 9, Ohio, U.S.A.
1956 LAMPSON, Miss B. LOCKER; Keepers Cottage, Copthorne, Sussex.
1954 LANCASTER, M. C., Ph.D., B.Sc., M.R.C.V.S., F.Z.S.; 76 Westwood Road, Bemerton Heath, Salisbury, Wilts.
1957 LANE, G. B.; Moor Cottage, Arbrook Lane, Esher, Surrey.
1954 LANG, Dr. E. M.; Zoologischer Garten, Basel, Switzerland.
1950 LANGBERG, WALTHER; Tudskaervej 22, Copenhagen, Vanløse, Denmark.
1919 LAW, SATYA CHURN, M.A., Ph.D., F.Z.S., F.N.I., M.B.O.U.; 50 Kailas Bose Street, Calcutta, India.
1952 LAWRENCE, C. C.; Normacot, Cressing, Braintree, Essex.
1955 LAWRENCE, K. J., F.Z.S.; 65 St. Mary's Road, Kelvedon, Nr. Colchester, Essex.
1930 LAX, J. M. S.; Southfield, Crook, Co. Durham.
1949 LAZZERONI, IVO; 524 South Dancove Drive, West Covina, Calif., U.S.A.
1956 LEARNARD, R. A.; 1200 Ring Building, Washington 6, D.C., U.S.A.
1956 LEATHERBARROW, R.; 4 Oxford Street, Finedon, Wellingborough, Northants.
1958 LEBER, Miss JOYCE; Mitcham Road, Donvale, Victoria, Australia.
1953 LEE, N. A.; 8 Canada Crescent, Bispham, Blackpool.
1957 LEIGHTON, A. L.; 42 Bramley Avenue, Coulsdon, Surrey.
1956 LEISER, Dr. T. M.; St. Annastraat 378, Nijmegen, Holland.
1946 *LEMON, Miss E. K.; c/o 1007 Government Street, Victoria, B.C., Canada.
1947 LESLIE, JOHN; 34 Amroth Avenue, Toronto 13, Ontario, Canada.
1949 LEVER, H.; 64 Union Street, Hyde, Cheshire.
1957 LEVON, Dr. H.; Box 497, Welkom, O.F.S., South Africa.
1957 LEWIS, E. C.; 30 Birkbeck Road, Acton, London, W. 3.
1957 LEWIS, Mrs. KARL E.; P.O. Box 148, Houma, Lousiana, U.S.A.
1946 LEWIS, W. O.; "Milnsbridge," Bicton Heath, Shrewsbury.
1955 LIEVENS, D.; Kaaiweg 44, Moerzeke, by Dendermonde, Belgium.
1957 LILLEY, JAMES; Beechvale, Drumbeg, Lisburn, Co. Antrim, N. Ireland.
1952 LIMBERG, HANS; Harscampstrasse 62, Bad Aachen, Germany.
1951 LINDSAY, A.; 422 Lake Street, Oak Park, Illinois, U.S.A.
1956 LINDSAY, P. A.; "Glendene," Surig Road, Canvey Island, Essex.
1953 LINFIELD, W. F.; Grans. Cottage, Thakeham, Nr. Pulborough, Sussex.
1951 LIPPENS, COMTE LÉON; Den Hul, 43 Boslaan, Knocke-Le Zoute, Belgium.
1941 LIVERMORE, JOHN W.; The Old Stone House Farm, P.O. Box 77, West Redding, Conn., U.S.A.
1956 LONGHURST, Mrs. A. R.; Landford Cottage, Landford, Nr. Salisbury, Wilts.
1956 LONGNEY, C. W.; Oxford Chambers, St. Stephen's Street, Bristol 1.
1954 LONSDALE, Mrs. E. M.; Grove House, Stapleford Abbotts, Romford, Essex.
1957 LOOMIS, J. C.; c/o Intercol, Apartado Aereo 3533, Bogota, Colombia.
1957 LOPEZ, A. N.; 1323–7th Street, San Fernando, Calif., U.S.A.
1951 LOUWMAN, P.; Dierenpark Wassenaar, Rijksstraatweg 667, Wassenaar, Holland.
1927 LOWE, Rev. J. R., M.A.; The Vicarage, Coln St. Aldwyns, Cirencester, Glos.

1951 LUCAS, V. J. ; Park House, West Rasen, Market Rasen, Lincs.
1955 LUKE, J. A. ; Bona Lodge, Aldourie, Inverness.
1947 LUMSDEN, Lt.-Col. WILLIAM V. ; Sluie, Banchory, Aberdeenshire, Scotland.
1956 LUPTON, H. ; 21 Deneside Mount, Bankfoot, Bradford 5, Yorks.
1952 LUTHER, H. M. ; 26 Park Crescent, Portland Place, Regent's Park, London W. 1.
1956 LUTTMER, J. , Esher Park Avenue, Esher, Surrey.
1947 LYNCH, G., F.Z.S. ; 21 Sunnycroft Road, Hounslow, Middx.
1957 LYONS, Mrs. JUNE R. ; P.O. Box 1947, Durban, South Africa.

1948 MACK, H. G. ; 11 Elora Street, Guelph, Ontario, Canada.
1954 MACLEOD, N. ; White Lodge, Strathpeffer, Scotland.
1953 MACRAE, Miss H. I. ; 15 Forbes Road, Edinburgh 10, Scotland.
1957 MACROW, PETER M. ; Ridge Road, Mt. Lofty, South Australia.
1947 MAITLAND, Miss M. C. ; North Lodge, Goring-by-Sea, Sussex.
1956 MAKIN, C. ; " Ashbourne," Craven Road, Rainhill, Nr. Liverpool.
1957 MALPASS, JOHN A. ; 1132 Eyre Street, Ballarat, Victoria, Australia.
1954 MARLER, C. J. S. ; Pheasants Nest, Weston Underwood, Olney, Bucks.
1957 MARSH, E. G. ; Cuckoo Paddock, Nempnett, Blagdon, Nr. Bristol.
1957 MARSH, Mrs. E. G. ; Cuckoo Paddock, Nempnett, Blagdon, Nr. Bristol.
1950 MARSHALL, J. C. ; 25 Stevens Road, Sandiacre, Notts.
1930 MARTIN, A. ; 26 Somerford Road, Reddish, Stockport.
1951 MASON, H., M.C., F.Z.S. ; 2 Dunstan Road, London, N.W. 11.
1952 MASON, L. M. ; Talbot Manor, Fincham, King's Lynn, Norfolk.
1956 MATTHEWS, F. A. ; 66 Tindale Road, Artarmon, N.S.W., Australia.
1958 MATTHEWS, T. W. ; 11 Sandwell Road, Handsworth, Birmingham.
1956 MAXWELL, E. A. ; " Warrambien," Cove, Dumbartonshire.
1929 MAXWELL, P. H., F.Z.S., M.B.O.U. ; c/o Zoological Society of London, Whipsnade Park, Nr. Dunstable, Beds.
1913 *MAXWELL-JACKSON, Miss M., F.Z.S. ; Percy House, Scotton, Knaresborough, Yorks.
1922 *MAYER, F. W. SHAW, C.M.Z.S. ; c/o Mr. R. W. Tebb, Lae, New Guinea, via Australia.
1955 MEES, G. F. ; Rijksmuseum van Natuurlijke Historie, Leiden, Holland.
1958 MEIJER, F. ; Buurtweg y Doorn, Holland.
1957 MENICHINI, PATRICK ; Philadelphia Zoological Garden, 34th Street and Girard Avenue, Philadelphia 4, Penn., U.S.A.
1935 MERCK, Dr. WOLFGANG ; Rupert Strasse 55, Hamburg-Nieustedten, Germany.
1950 MERRY, C. ; 89 King William Street, Tunstall, Stoke-on-Trent.
1956 MEYERS, DUDLEY C. ; Messrs. Sinclair Murray and Co., Private Ltd. ; 14 India Exchange Place, Calcutta 1, India.
1953 MIDDLETON, L. G. ; The Old Vicarage, Church Town, Nr. Garstang, Lancs.
1951 MIDWINTER, J. ; 62 Oxford Road, Burford, Oxford.
1956 MILFORD, B. F. ; 2 Fairway Avenue, Boreham Wood, Herts.
1957 MILLAR, IVAN G. ; 141 Seventh Avenue, Royston Park, South Australia.
1957 MILLER, CHARLES W. ; 1250 East Georgia Avenue, Phoenix, Arizona, U.S.A.
1951 MILLER, H. E. ; " Westwater," Tedburn St. Mary, Nr. Exeter, Devon.
1950 MILLER, R. C. ; Standard Bank of South Africa, Ltd., Pietermaritzburg, Natal, S. Africa.
1937 MILLIGAN, H. ; Upper Manor Farm, Leckford, Stockbridge, Hants.
1951 MILLIGAN, I. B. ; 5 Silsey Avenue, Sale, Cheshire.

1957 MILLS, G. H. L.; 56 Picton Road, Hakin, Milford Haven, Pembs., S. Wales.
1956 MILNE, L. THORNTON, M.A.(Agric.) Cantab; Lower Coombe Farm, East Allington, Nr. Totnes, S. Devon.
1951 MILNE, R. S.; 18 Silverwell Street, Bolton, Lancs.
1929 MILNES-COATES, Capt. Sir CLIVE, Bart., O.B.E., F.Z.S.; 13 Hyde Park Gate, London, S.W. 7.
1937 MILTON, Capt. STANLEY F.; 75 Portland Avenue, Gravesend, Kent.
1957 MITCHELL, ALAN G.; 77 Welford Road, Sutton Coldfield, Warwicks.
1943 MITCHELL, HAROLD A.; 2 Stuart Street, East Kilbride, Lanarkshire.
1956 MITCHELL, J.; 33 Chapman Street, Wakari, Dunedin, New Zealand.
1952 MITCHELL, R. E.; 49 Woodlands Avenue, Church End, Finchley, N. 3.
1950 MITCHELL-FOX, Mrs. E. M.; Tresawle, Wheatridge Lane, Livermead, Torquay, Devon.
1956 MIYAKE, MASAMI; P.O. Box 11, Kakogawa-shi, Hyogo-ken, Japan.
1926 MOODY, A. F.; Lilford, Oundle, Peterborough.
1957 MOORE, D. R.; Leven Lane P.F., Yarm, Yorks.
1950 MOORE, J. T.; 17 Gold Street, Wellingborough, Northants.
1928 MOORE, ROBERT T.; The Moore Zoological Laboratory, Box 388, Occidental College, Los Angeles 41, California, U.S.A.
1954 MORGAN, Mrs. A.; 38 Inham Road, Chilwell, Notts.
1958 MORGAN, G. H.; The Gunns, Takeley, Nr. Bishop's Stortford, Herts.
1949 MORNY, C. J.; 52 Draycott Place, London, S.W. 3.
1931 MORRISON, A. R. G., F.Z.S., M.B.O.U.; c/o Chartered Bank of India, Australia and China, Kuching, Sarawak.
1956 MORTON, Rev. NEVILLE; 38 Tempest Avenue, Darfield, Nr. Barnsley, Yorks.
1947 MOSFORD, FRANK; The Elms, Churton Heath, Saighton, Nr. Chester.
1956 MOSHEIM, E.; 7 Gardiner Road, Hawthorn, Victoria, Australia.
1927 MOTT, B.; Grey Mill Farm, Wootton Wawen, Nr. Henley-in-Arden.
1929 MOTTERSHEAD, G. S., F.Z.S.; Zoological Gardens, Chester.
1923 MOUNTAIN, Capt. WALTON; Groombridge Place, Groombridge, Kent.
1957 MUFF, R. N.; 6. St. Pauls Avenue, Halifax Road, Bradford 6.
1956 MUIRHEAD, D. W.; 23 Somerleyton Street, Unthank Road, Norwich, Norfolk.
1956 MULCAHY; 21 Roberts Road, Haddenham, Nr. Aylesbury, Bucks.
1958 MULLEN, Mrs. GRACE E.; 158 N. Hill Street, Pasadena, Calif., U.S.A.
1957 MULLER, ROLAND A.; Box E., Santee, Calif., U.S.A.
1956 MURPHY, Rev. Father MAX E.; The Presbytery, Chaguanas, Trinidad, B.W.I.
1947 MURRAY, H.; Bracken, Cornsland, Brentwood, Essex.
1952 MURRAY, J. B.; c/o Messrs. Bovril, Ltd., 123 Chaussée de Mons, Brussels, Belgium.
1939 MURRAY, R. J.; 12 High Road, Camberwell, E. 6, Victoria, Australia.
1949 MURRAY, SAMUEL, F.Z.S.; 18 Somerset Gardens, Lewisham, S.E. 13.
1956 McCREERY, G. H.; "Roydon," Hazel Croft, Carr Lane, Shipley, Yorks.
1926 *McCULLAGH, Sir CRAWFORD, Bart.; Lismara, Whiteabbey, Belfast, N. Ireland.
1950 McGOWAN, H.; 13 Robertson Way, Ash, Aldershot, Hants.
1956 McGRATH, J. J.; Brownstown House, Curragh, Co. Kildare, Eire.
1953 McHALE, J. P.; 1526 W. Highland Avenue, Chicago 26, Ill., U.S.A.
1954 McKEE, Mrs. K. M.; 2603 Maple Crescent, Rossland, B.C., Canada.

1950 McKenzie, D. L. ; The New Inn, Winchelsea, Sussex.
1955 McLachlan, G. R. ; Museum and Snake Park, 28 Bird Street, Port Elizabeth, S. Africa.
1955 McLaughlin, T. J. ; The Bungalow, Gordon Ave., Foxrock, Co. Dublin, Eire.
1955 McLean, A., B.Sc., M.R.C.V.S., D.V.H. ; Bellevue Zoological Gardens, Belfast, N. Ireland.
1956 McMeekin, Robert W. ; Tates Creek Road, Lexington, Ky., U.S.A.

1952 Newell, J. P., Ph.C., M.P.S.I., D.Opt., M.I.O.S. ; 4 Pearse Street, Athlone, Eire.
1930 Newill, D. S., M.D. ; Box 634, Connellsville, Pa., U.S.A.
1953 Newland, R. A. ; 93 Arne Avenue, Parkstone, Poole, Dorset.
1956 Newmark, G. H., F.Z.S. ; 20 Chalfont Court, Baker Street, London, N.W. 1.
1957 Newsome, K. R. ; 154 Stewart Street, Rockhampton, Queensland, Australia.
1957 Nicholls, J. T. ; 83 Gow Street, Padstow, N.S.W., Australia.
1931 Nicholson, N. ; Edenvale, 16 Weardale Place, Stockton-on-Tees.
1955 Nicolai, Dr. J. ; Max Planck-Institut, Buldern üb. Dülmen/Westf., Germany.
1947 Nicoullaud, J. G. ; 48 rue Descartes, Chinon, France.
1954 Nixon, T. F. E. ; " Honeystones," Leverington, Wisbech, Cambs.
1947 Noble, R. A. W. ; Little Grange, Canterbury Road, Margate, Kent.
1948 Noordzij, J. H. ; Burg. Visserpark 13, Alphen a. d Rijn, Holland.
1949 Noreen, George W. ; 22008-9th Avenue, Bothell 3, Washington, U.S.A.
1939 Norris, Kenneth A., F.Z.S., M.B.O.U. ; Elmstone, 45 Highfield Road, Purley, Surrey.

1953 Oakes, J. H. ; 93 Robinet Road, Beeston, Nottingham.
1956 Oakie, Walter V. ; Ransom Road, Winston-Salem, North Carolina, U.S.A.
1958 Oakley, D. ; 72 Fackley Road, Stanton Hill, Sutton-in-Ashfield, Notts.
1956 O'Connell, W. C. ; 2128 Dixie Highway, Fort Mitchell, Kentucky, U.S.A.
1955 Oliver, C. ; 53 Dollis Road, Finchley, London, N. 3.
1950 Olivier, Georges, F.Z.S., M.B.O.U. ; 6 rue Ch.-Flavigny, Elbeuf (Seine Inférieure), France.
1945 Olson, Leo B. ; 835 South First Street, De Kalb, Illinois, U.S.A.
1957 Olssen, Mrs. Marie Earl ; 85–34—148th Street, Jamaica 35, New York, U.S.A.
1952 Olsson, C. J. ; Erik Dahlbergsgatan 19, Gothenburg, Sweden.
1955 O'Neill, Jorge ; Largo do Conde Barão 5, Lisbon, Portugal.
1956 Orford, T. J. ; 14 Dean Street, Caringbah, N.S.W., Australia.
1956 Orlando, Dr. Vittorio ; Via Roma 401, Palermo, Italy.
1954 Orsatti, P. ; 97 Beaver Avenue, Toronto 4, Ontario, Canada.
1957 Ostermeyer, K. A. ; 85 Eastern Road, Romford, Essex.
1928 Ostrehan, Clement ; Kington Rectory, Worcester.
1947 Overend, Miss Eunice ; 49 Alexandra Road, Frome, Somerset.
1953 Overländer, D. ; Austrasse 17, Bad Honnef/Rhein, Germany.
1957 Owen, T. C. ; Upper Hilcot Farm, Withington, Nr. Cheltenham, Glos.
1953 Ozanne, H. W. H. ; Istambool Lodge, La Ramée, St. Peter Port, Guernsey, C.I.

1956 PAGE, Mrs. B. V. ; " Greenanore," Tewin Wood, Welwyn, Herts.
1956 PALLETT, L. E. ; " Peter Pan," 8 Twynham Road, Maidenhead, Berks.
1944 PALMELLA, The Duke of, F.Z.S. ; 116 Rua Escola Polytechnica, Lisbon, Portugal.
1957 PALMER, H. G. ; The Shrubbery, 115 Roman Road, Birstall, Leics.
1955 PALSSON, W. F. ; Halldorsstadir, Laxardal, via Husavik, Iceland.
1950 PANTING, PETER J., B.Sc., F.Z.S. ; Y Felin Isaf, Drim, Dyffryn, Goodwick, Pembs.
1957 PAOLETTI, GIOVANNI ; Via Rubieri 5, Firenze, Italy.
1957 PAPÉ, T. V. F., F.Z.S. ; " Hollington," Kimbolton Road, Bedford.
1954 PARIS, P. G. ; Boskenna, St. Buryan, Cornwall.
1957 PARKER, G. ; 23 Hudson Street, Newton Park, Port Elizabeth, South Africa.
1956 PARKES, Dr. K. C. ; Carnegie Museum, Pittsburgh 13, Pennsylvania, U.S.A.
1957 PARSONS, ROBERT P. ; Route 2, Box 252, Carmel, Calif., U.S.A.
1957 PARTRIDGE, C. R. ; 61 High Oak Road, Ware, Herts.
1952 PARTRIDGE, P. B. ; 164 Waverley Avenue, Twickenham, Middx.
1934 PARTRIDGE, W. R., F.Z.S. ; The Bungalow, Lower Haseler, Nr. Evesham, Worcs.
1952 PATTEN, R. A., B.V.Sc. ; " Dunromin," Windsor Road, Kellyville, N.S.W., Australia.
1949 PAYN, Major W. H., M.B.E., M.B.O.U. ; Hartest Place, Bury St. Edmunds, Suffolk.
1950 PAYNE, C. M. ; The Malt House, Barford, Warwick.
1955 PAYNE, Mrs. C. M. ; The Malt House, Barford, Warwick.
1957 PEARL, H. ; Lords Bridge, Harlton, Cambs.
1957 PEARSON, CHARLES J. ; Box 513, Occidental College, Los Angeles 41, Calif., U.S.A.
1957 PEARSON, H. E. ; Pearson's Bird and Animal Farm, Southbury, Conn., U.S.A.
1946 PEARSON, RAYMOND ; 179 West Auckland Road, Darlington, Co. Durham.
1957 PEARSON, S. W. ; 25 Plant Lane, Sawley, Long Eaton, Nottingham.
1940 PEAT, RODERICK M., F.Z.S. ; 11 Ironmonger Lane, London, E.C. 2.
1956 PELCH, WILLIAM E. ; 5016 West 25th Place, Cicero 50, Ill., U.S.A.
1953 PERRY, J. A. W. ; 14 New Way, Pinelands, Nr. Cape Town, S. Africa.
1956 PETERS, Mrs. MARGARET F. ; Plashett Park Farm, Ringmer, Nr. Lewes, Sussex.
1957 PETTENGILL, DAVID G. ; 518 N. First Street, Libertyville, Ill., U.S.A.
1956 PETTER, E. R. ; 9 Short Street, Harden, N.S.W., Australia.
1958 PHILLIPS, D. H. G. ; The Croft, 27 Shirley Drive, Hove, Sussex.
1954 PHILLIPS, Miss R. F. ; 488 Shirley Road, Hall Green, Birmingham 28.
1935 PHIPPS, Mrs. L. N., F.Z.S., M.B.O.U. ; The Manor House, Minster Lovell, Oxon.
1955 PIGG, NOLAN ; 3707 Jackson Street, Bellwood, Ill., U.S.A.
1954 PILCHER, R. E. M., M.A., F.R.C.S. ; The Meadows, 39 Spilsby Road, Boston, Lincs.
1934 PITT, W. S. ; Wildwood, Silverdale Avenue, Walton-on-Thames, Surrey.
1924 PLATH, K. ; 114 S. East Avenue, Oak Park, Ill., U.S.A.
1956 PLUMB, T. R. ; The Cayley Arms, Rhos-on-Sea, Colwyn Bay, N. Wales.
1958 POE, Mrs. FRANCES ; 147 Linden Avenue, Wilmette, Ill., U.S.A.
1949 POHLE, Prof. HORST C. ; Teachers' Training College (P.T.P.G.), Tondano, North Celebes, Indonesia.
1937 POLAK, Dr. A. C. ; Spoorstraat 15, Amersfoort, Holland.

1925 POLTIMORE, Lady ; Benwell, P.O. Box 6, Bindura, Southern Rhodesia.
1956 POND, G. W. ; P.O. Box 10, Worcester, Cape Province, South Africa.
1956 POPE, P. A. ; 13 Torrington Road, Ashford, Kent.
1956 PORTER, G. J. C., F.Z.S. ; 62 New Park Avenue, Palmers Green, London, N. 13.
1957 PORTER, H. D. ; 164 Park Road, Bearwood, Smethwick 41, Staffs.
1914 POTTER, BERNARD E., M.B., M.R.C.S., L.R.C.P., F.Z.S. ; 39 Devonshire Place, London, W. 1.
1956 POWE, Mrs. M. ; Pythingdean, Pulborough, Sussex.
1956 POWERS, JAMES F. ; 736 Martin Blvd., San Leandro, Calif., U.S.A.
1957 PRAILL, L. J. ; " The Knoll," Church Road, Tupsley, Hereford.
1928 *PRESTWICH, ARTHUR A. ; 61 Chase Road, Oakwood, London, N. 14.
1951 PRIEST, Dr. A. A. ; 434–6 Acheson Building, 2131 University Avenue, Berkeley 4, Calif., U.S.A.
1954 PRIP, F. ; Adolphsvej 39, Gentofte, Denmark.
1956 PRITCHARD, J. P. ; Duke's Highway, Bordertown, South Australia.
1956 PURDY, R. F. W. ; Flat No. 1, " Riverhome," The Green, Hampton Court, Middx.
1953 PYE, Brigadier RANDALL, D.S.O. ; Avenings Farm, Danehill, Sussex.

1948 QUENBY, H. F. ; " Standard " House, High Street, Baldock, Herts.
1913 QUINCEY, R. S. DE Q., F.Z.S. ; The Vern, Marden, Hereford.
1957 QUINQUE, Dr. HENRY ; 70 rue Lamarck, Paris 18e, France.

1948 RABBIN, HILBERT J., I.S.O., F.Z.S. ; 33 Kingsway, Wembley.
1956 RADEMACHER, PERRIN G. ; 1700 Manchester Road, Wheaton, Ill., U.S.A.
1957 RADTKE, ELDON ; 716 Henry Street, Peru, Ill., U.S.A.
1954 RAEVEN, Dr. M. A. ; Houwelingenplantsoen 8, Vught, 's Hertogenbosch, Holland.
1957 RAFFTER, NORMAN H. ; P.O. Box 1124, Johannesburg, South Africa.
1956 RAMSDEN, J. ; " Millbrook," Benton Park, Harrogate Road, Rawdon, Nr. Leeds.
1954 RANDAU, G. ; Avenida Rui Barbosa 500, Recife, Pernambuco, Brazil.
1943 RANKIN, Lieut.-Col. N., M.A., F.R.G.S., F.R.P.S., F.Z.S. ; House of Treshnish, Calgary, Isle of Mull, Argyll, Scotland.
1950 RATH, JOSEPH ; Maria Lutzst. 9, Pfaffenhofen-Jlm (Oberbayern), Germany.
1939 RAVEN, WILLIAM H., O.B.E. ; Meadow Cottage, Church Walk. Wellesbourne, Nr. Warwick.
1948 RAY, Mrs. V. E. ; Hulwating Tea Estate, Amhuri P.O., Assam, India.
1950 RAYMAEKERS, L. ; 71 Avenue Molière, Brussels, Belgium.
1947 REAY, J. H. ; Cranmore, The Close, Hillingdon, Middx.
1956 REBELLO, STEPHEN ; 1428 Grand Army Highway, Somerset, Massachusetts, U.S.A.
1955 REDMAN, D. S., F.Z.S. ; Bleak Hall, Biggleswade, Beds.
1956 REED, R. C. ; 11 Montah Avenue, Killara, N.S.W., Australia.
1950 REES, F. A. D. ; Leckford, Stockbridge, Hants.
1956 REEVE, J. M. ; Ash Lea, New Station Road, Bolsover, Nr. Chesterfield.
1956 REID, G. ; " Grassington," Rotherham, North Canterbury, New Zealand,
1939 REID, Miss MARION C. ; c/o Messrs. John Reid, Ltd., Walt Street, Newcastle, N.S.W., Australia.
1951 REID-HENRY, D. M. ; 43 West View Drive, Woodford Green, Essex.

1958 Reilly, K. P. ; Box 2, Tungamah, Victoria, Australia.
1951 Rendell, R. G. ; 60 Guinions Road, High Wycombe, Bucks.
1957 Reynolds, S. ; P.O. Box 1055, Victoria, British Columbia, Canada.
1950 Rich, Joseph W. ; 1073 West 11th Street, San Pedro, Calif., U.S.A.
1955 Richardson, J. ; 106 Bransty Road, Whitehaven, Cumberland.
1949 Richardson, James ; Spencer House, 101 Stockton Lane, York.
1953 Ridley, C. T. ; Birdwarren Farm, Varsity View P.O., Box 217, Charleswood, Manitoba, Canada.
1954 Rigge, J. S. ; Old Broadgate, Millom, Cumberland.
1948 Riis-Hansen, Kai ; Nørre Alle 75, Glostrup, Denmark.
1956 Riley, E. ; Birkwray, Outgate, Nr. Ambleside, Westmorland.
1937 *Ripley, S. Dillon, Ph.D., M.B.O.U. ; Kilravock, Litchfield, Conn., U.S.A.
1935 Risdon, D. H. S., F.Z.S. ; The Dudley Zoological Society, Dudley, Worcs.
1956 Ritchie, D. ; 66 Boronia Road, Boronia, Victoria, Australia.
1957 Roberts, A. M. ; 221 Clutter Avenue, San Antonio 4, Texas, U.S.A.
1957 Roberts, Bryan J. ; Bilsen Road, Wavell Heights, Brisbane, Queensland, Australia.
1943 Robertson, Dr. A. R. ; P.O. Box 95, Kroonstad, O.F.S., South Africa.
1947 Robinson, B. E. ; Field House, Blackborough Road, Reigate, Surrey.
1951 Robinson, G. E. ; 487 Little Horton Lane, Bradford.
1956 Robinson, Mrs. J. E., F.Z.S. ; Flat 1, 63 Nightingale Lane, Balham, London, S.W. 12.
1927 Robison, A. W. ; 135 Maiden Lane, San Francisco 8, Calif., U.S.A.
1957 Robson, E. G. ; 114 Woodlands Avenue, Eastcote, Ruislip, Middx.
1952 Rodgers, J. ; 39 Fore Street, Totnes, Devon.
1957 Roer, Bernard ; 6553 N.—27th Avenue, Phoenix, Arizona, U.S.A.
1956 Roger, A. S. ; 16 Walton Street, London, S.W. 3.
1956 Rohrig, S. H. ; 12 Fisk Avenue, Glengowrie, South Australia.
1957 Rohrlach, M. L. ; 12 Harrow Road, Somerton Park, Adelaide, South Australia.
1955 Rokosky, Emil J. ; Racine Zoological Park, 2131 North Main Street, Racine, Wis., U.S.A.
1951 Rolph, W. ; Undley Lodge, Lakenheath, Suffolk.
1957 Rooke, P. ; 52 Redbourn Way, Scunthorpe, Lincs.
1945 Rooney, James P., M.B.O.U. ; 1514 South 12th Avenue, Yakima, Washington, U.S.A.
1946 Roote, Cyril C. ; 116 Cardinal's Walk, Scraptoft Lane, Leicester.
1954 Rose, W. H. ; 44 Sapcote Road, Hinckley, Leics.
1957 Rosevear, G. ; The Railway Convalescent Home (Staff), Trenython, Par, Cornwall.
1956 Rosseel-Neyrinck, V. ; Iseghemstreet 287, Rumbeke, Belgium.
1954 Rossiter, Dr. N. A. ; Colonial Mutual Bldg., West Street, Durban, Natal, S. Africa.
1953 Roters, J. ; Elk Lumber Co., Box 170, Temiskaming, Quebec, Canada.
1956 Rotherwick, Lord ; Sedgwick Park, Horsham, Sussex.
1954 Rothwell, Dr. K. G. ; 51 Lutterworth Road, Leicester.
1954 Rouillard, J. V. ; P.O. Box 72, Stanger, Natal, S. Africa.
1956 Rouse, O. ; " Mirasol," Frithwood Lane, Billericay, Essex.
1951 Royden, T. W. E. ; Broad House, Fleggburgh, Norfolk.
1952 Rudkin, F. H., Jr. ; 3rd and Fillmore Streets, Fillmore, California, U.S.A.
1950 Russell, Barnabas, F.R.S.A., F.Z.S., F.R.H.S. ; 20 Bucklersbury, Hitchin, Herts.
1956 Russell, K. ; " Rafso Cottage," Outwell, Nr. Wisbech, Cambs.

1954 RUTGERS, A. ; Boeckenrode, Joppe, Holland.
1957 RYAN, Mrs. EMILY ; 245 West—51st Street, New York 19, N.Y., U.S.A.
1927 RYCROFT, Mrs. V. ; 8 The Mead, Cirencester, Glos.

1954 SALMON, W. G. ; Angley Lake, Cranbrook, Kent.
1956 SALTER, Miss G. ; "The Flat," Primley House, Paignton, Devon.
1957 SANDERSON, J. R. ; 20 Wensleydale Road, Scawsby, Doncaster, Yorks.
1957 SANDERSON, R. E. ; 89 Darby Street, Lower Dale Road, Derby.
1955 SANDERSON, S., 33 Cardinal Avenue, Boreham Wood, Herts.
1953 SANDS, W. M., F.Z.S. ; Silver Birches, Farrar Lane, Adel, Leeds 16.
1956 SANKEY, P. H. ; Tamworth House Restaurant, Hunstanton, Norfolk.
1945 SAUNDERS, RONALD, F.Z.S. ; Regent Parade, Sycamore Road, Amersham, Bucks.
1956 SAVORY, Major R. G. H., F.I.A.I., F.R.E.S. ; 138 Hatch Road, Pilgrims Hatch, Brentwood, Essex.
1957 SAWYER, E. W. ; Suite 610 Quinby Bldg., 650 S. Grand Avenue, Los Angeles 17, Calif., U.S.A.
1949 *SAWYER, R. C. J., F.Z.S. ; 226 Haggerston Road, London, E. 8.
1954 SCAMELL, K. M., O.B.E. ; Woodbury Cottage, Broad Lane, Newdigate, Surrey.
1953 SCAMELL, Mrs. K. M., F.Z.S. ; Woodbury Cottage, Broad Lane, Newdigate, Surrey.
1956 SCHLESSELMAN, EDMOND A., M.D. ; 450 Blackstone Avenue, Fresno, Calif., U.S.A.
1949 SCHNEIDER, P. E. ; 5113 No. Acacia Street, San Gabriel, Calif., U.S.A.
1955 SCHOMBERG, G. ST. GEORGE, F.Z.S. ; Sweffling Grange, Saxmundham, Suffolk.
1957 SCHOTHORST, L. ; Verl. Hoofdstraat 29, Hoogezand, Holland.
1957 SCHUH, A. ; 648 Houston Avenue, Port Arthur, Texas, U.S.A.
1951 SCHUMACHER, Mrs. H. L. ; 7027 Sycamore Avenue, Seattle 7, Washington, U.S.A.
1914 SCHUYL, D. G. ; Kralingscheweg 332, Rotterdam O, Holland.
1934 SCOTT, A. H., F.Z.S. ; Abbotswell, Frogham, Fordingbridge, Hants.
1938 *SCOTT, PETER, C.B.E., D.S.C., M.A., F.Z.S., M.B.O.U. ; The New Grounds, Slimbridge, Gloucestershire.
1956 SCOTT, W. G. ; 1 Maranoa Crescent, Coburg, Melbourne, Victoria, Australia.
1928 SCOTT-HOPKINS, Capt. C., F.Z.S. ; Knoll House, Shiplake, Oxon.
1956 SCOURFIELD, J. G. ; 6 Oakland Avenue, Dialstone Lane, Stockport, Cheshire.
1955 SCRAGG, D. G., F.Z.S., F.R.H.S. ; 4 Drakefield Road, Liverpool 11.
1951 SEAGO, J., F.Z.S. ; Hall Common, Ludham, Norfolk.
1954 SEARLE, K. C., M.B., B.S., C.M.Z.S. ; Windsor House, Victoria, Hong Kong.
1951 SEARS, JOHN L. ; Reel Hall, Shamley Green, Guildford, Surrey.
1956 SECCULL, E. A. ; 6 Cromwell Road, Banbury, Oxon.
1956 SERJEANTSON, Major J. M. ; Yed Hill, Ringwood, Hants.
1953 SEWELL, W. A., F.Z.S. ; Pleasley Road, Skegby, Sutton-in-Ashfield, Notts.
1954 SHARPE, W. G. ; 6 High Street, Flitwick, Bedford.
1957 SHAW, GEORGE W. ; 117 North Lancaster Avenue, Dallas 3, Texas, U.S.A.
1932 SHEARING, A. P. ; Corner Cottage, Woodlands Park, Woodlands Lane, Stoke d'Abernon, Cobham, Surrey.

1949 *Sheffler, William J., M.B.O.U. ; 4731 Angeles Vista Boulevard, Los Angeles 43, Calif, U.S.A.

1951 Shellim, Dr. M. A. ; c/o The Eastern Bank, Ltd., 2–3 Crosby Square, London, E.C. 3.

1956 Sheppard, J. L. ; 9 Gardeners Road, Bentleigh East, Melbourne, Victoria, Australia.

1956 Shepperson, L. ; The Chestnuts, March, Cambs.

1953 Sholar, N. P., D.D.S. ; Box 265, Mooresville, N.C., U.S.A.

1953 Shonaman, W. ; 1890–21st. Avenue, New Westminster, B.C., Canada.

1957 Shuler, J. B., Jr. ; 43 Kirkwood Lane, Greenville, S.C., U.S.A.

1955 Shynal, J. ; 48 Holly Avenue, Hamilton, Ontario, Canada.

1946 Sibley, A. E., F.Z.S. ; 7 Alexandra Gardens, Hounslow, Middx.

1957 Sibley, Charles G. ; Fernow Hall, Cornell University, Ithaca, New York, U.S.A.

1956 Simmonds, S. C. ; 99 Court Lane, Dulwich, London, S.E. 21.

1955 Simmons, K. E. L. ; Lamorna, Beechwood Ave., Tilehurst, Reading, Berks.

1956 Simmons, K. O. ; 6 Kenpas Highway, Coventry, Warwicks.

1956 Simões, Francisco José ; Quinta das Terras, Pinheiros de Loures, Portugal.

1953 Simões, Joaquim F. ; L. do Conde Barão, 6, Lisboa, Portugal.

1924 Simpson, H. W. ; 6 Barry Road, Stonebridge, Willesden, London, N.W. 10.

1957 Slack, E. E. ; Ivanhoe House, 28 Thompson Street, Langley Mill, Notts.

1947 Slader, W. T., J.P. ; Pentillie, Honiton Road, Exeter.

1956 Slater, C. ; 12 Moorland View, Gleadless, Sheffield 12.

1954 *Slotter, Mrs. C. F. ; Hopewell, New Jersey, U.S.A.

1954 Smart, T. E. ; Castlemead, Tenbury Wells, Worcs.

1956 Smith, A. R. S., F.Z.S. ; 17 Eastfield Avenue, Wellshot, Cambuslang, Lanarkshire.

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1.—The name of the Society shall be THE AVICULTURAL SOCIETY, and its object shall be the study of British and foreign birds in freedom and in captivity. Poultry, Pigeons, and Canaries shall be outside the scope of the Society. The year of the Society, with that of each volume of the Society's Magazine, which shall be known as the AVICULTURAL MAGAZINE, shall commence with the month of January and end on the 31st December following.

2.—The Avicultural Society shall consist of Ordinary, Life, Honorary Life Members, and Honorary Fellows, and the last shall be restricted in number to ten, and be elected by the Council.

3.—The Officers of the Society shall be elected, annually if necessary, by Members of the Council in the manner hereinafter provided, and shall consist of a President, one or more Vice-Presidents, a Secretary-Treasurer, an Assistant Secretary, an Editor, and a Council of fifteen Members. The President, Vice-Presidents, Secretary-Treasurer, Assistant Secretary, and Editor shall be *ex officio* Members of the Council.

4.—New Members shall be proposed in writing, and the name and address of every person thus proposed, with the name of the Member proposing him shall be published in the next issue of the Magazine. Unless the candidate shall within two weeks after the publication of his name in the Magazine, be objected to by at least two Members, he shall be deemed to be duly elected. If five Members shall lodge with the Secretary objections to any candidate he shall not be elected, but the signatures to the signed objections must be verified by the Scrutineer. If two or more Members shall object to any candidate the name of such candidate shall be brought before the Council at their next meeting, and the Council shall have power to elect or to disqualify him from election.

5.—Each Member shall pay an annual subscription of £1, to be due and payable in advance on the 1st of January in each year; and, on payment of the subscription shall be entitled to receive all the numbers of the Society's Magazine for the current year. Life Member's fee, £15.

6.—Members intending to resign their membership at the end of the current year of the Society are expected to give notice to the Secretary before the 1st of December, so that their names may not be included in the "List of Members", which shall be published annually in the January number of the Magazine.

7.—The Magazine of the Society shall be issued on or about the first day of every month, and forwarded, post free, *to all the Members who shall have paid their subscriptions for the year; but no Magazine shall be sent or delivered to any Member until the annual subscription shall have reached the hands of the Secretary-Treasurer.* Members whose subscriptions shall not have been paid as above by the first day in November in any year shall cease to be Members of the Society, but may be readmitted, at the discretion of the Council, on payment of the annual subscription.

8.—The President, Secretary-Treasurer, Assistant Secretary, and Editor shall be elected for a term of five years, and, should a vacancy occur, it may be temporarily filled by the Executive Committee (see Rule 10). At the expiration of the term of five years in every case it shall be competent for the Council to nominate the same officer, or another Member, for a further term of five years, unless a second candidate be proposed by not less than twenty-five Members of at least two years' standing, as set forth below.

In the November number of the Magazine preceding the retirement from office of the President, Secretary-Treasurer, Assistant Secretary, and Editor, the Council shall publish the names of those members whom they have nominated to fill the vacancies thus created; and these Members shall be deemed duly elected unless another candidate or candidates be proposed by not less than fifteen Members of at least two years' standing. Such proposal, duly seconded and containing the written consent of the nominee to serve, if elected, in the capacity for which he is proposed, must reach the Secretary on or before the 15th of November.

9.—The Members of the Council shall retire by rotation, three at the end of each year of the Society (unless a vacancy or vacancies shall occur otherwise) and three other Members of the Society shall be recommended by the Council to take the place of those retiring. The names of the three Members recommended shall be printed in the November number of the AVICULTURAL MAGAZINE. Should the Council's selection be objected to by fifteen or more Members, these shall have power to put forward three other candidates, whose names, together with the signatures of not less than fifteen Members proposing them, must reach the Secretary *by the 15th of November.* The names of the six candidates will then be printed on a voting paper and sent to each Member with the December number of the Magazine, and the result of the voting published in the January issue. Should no alternative candidates be put forward, in the manner and by the date above specified, the three candidates recommended by the Council shall be deemed to have been duly elected. In the event of an equality of votes the President shall have a casting vote.

If any Member of the Council does not attend a meeting for two years in succession the Council shall have power to elect another Member in his place.

10.—Immediately after the election of the Council that body shall proceed to elect three from its Members. These three, together with the Secretary-Treasurer, Assistant Secretary, and Editor, shall form a Committee known as the Executive Committee.

The duties of the Executive Committee shall be as follows :—

(i) In the event of the resignation of any of the Officers during the Society's year, to fill temporarily the vacancy until the end of the year. In the case of the office being one which is held for more than one year (e.g. Secretary-Treasurer, Assistant Secretary, or Editor) the appointment shall be confirmed by the Council at its next meeting.

(ii) To act for the Council in the decision of any other matter that may arise in connection with the business of the Society.

The decision of any matter by the Executive to be settled by a simple majority (three to form a quorum). In the event of a tie on any question, such question shall be forthwith submitted by letter to the Council for their decision.

The Executive shall not have power

(i) To add to or alter the Rules ;

(ii) To expel any Member ;

(iii) To re-elect the Secretary-Treasurer, Assistant Secretary, or Editor for a second term of office.

It shall not be lawful for the Treasurer to pay any account exceeding £10 unless such account be duly sanctioned by another Member of the Executive.

It shall be lawful for the Secretary-Treasurer or Editor to pledge the Society's credit for a sum not exceeding £100.

Should a Member wish any matter to be brought before the Council direct such matter should be sent to the Secretary with a letter stating that it is to be brought before the Council at their next meeting, otherwise communications will in the first place be brought before the Executive.

A decision of a majority of the Council, or a majority of the Executive endorsed by the Council, shall be final and conclusive in all matters.

11.—The Editor shall have an absolute discretion as to what matter shall be published in the Magazine (subject to the control of the Executive Committee). The Secretary and Editor shall respectively refer all matters of doubt and difficulty to the Executive Committee.

12.—The Council (but not a committee of the Council) shall have power to alter and add to the Rules, from time to time, in any manner they may think fit. Five to form a quorum at any meeting of the Council.

13.—The Council shall have power to expel any Member from the Society at any time without assigning any reason.

The Society's Medal

(Instituted 1st November, 1896)

RULES

The Medal may be awarded at the discretion of the Council to any Member who shall succeed in breeding, in the United Kingdom, any species of bird which shall not, in the opinion of the Council, be known to have been previously bred in captivity in Great Britain or Northern Ireland. Any Member wishing to obtain the Medal must send a detailed account for publication in the Magazine within about eight weeks from the date of hatching of the young, and furnish such evidence of the facts as the Council may require. The Medal will be awarded only in cases where the young shall live to be old enough to feed themselves, and to be wholly independent of their parents. The question of awarding a Medal for the breeding of local races or sub-species of species that have already been bred shall be at the discretion of the Council. No Medal can be given for the breeding of hybrids.

The account of the breeding must be reasonably full so as to afford instruction to our Members, and must appear in the AVICULTURAL MAGAZINE before it is published or notified elsewhere. It should describe the plumage of the young, and *be of value as a permanent record of the nesting and general habits of the species*. These points will have great weight when the question of awarding the Medal is under consideration.

In every case the decision of the Council shall be final.

The Medal will be forwarded to each Member as soon after it shall have been awarded as possible.

The Medal is struck in bronze (but the Council reserve the right to issue it in *silver* in very special cases) and measures 2½ inches in diameter. It bears on the obverse a representation of two birds with a nest containing eggs, and the words "The Avicultural Society—founded 1894". On the reverse is the following inscription: "Awarded to [*name of recipient*] for rearing the young of [*name of species*], a species not previously bred in captivity in the United Kingdom."

Breeding pair Red-rumps, £10 ; old cock, £4 10s. ; hen Cockatiel, £5 ; two 1957 Ring-necks, £5 each. All perfect and flying in large, exposed outdoor flights. Hard as nails. Exchanges considered. Wanted, hen G.-M. Rosella.—C. P. Guy, Lamorna Bird Farm, Combe-in-Teignhead, Newton Abbot. Phone : Shaldon 3293.

Cassell's *Book of Birds* (1870), 4 vols. (Coloured Plates) ; Houghton's *Mules and Hybrids* (C.P.) ; Naturalists' Library, *Birds of West Africa*, Vol. 2 (1837) (C.P.) ; Goldsmith's *Animated Nature*, 2 vols. (about 1840) (C.P.) ; Barton's *Pheasants* (1912) (C.P.) ; Mudie's *British Birds*, 2 vols. (1833) ; Russ's *Speaking Parrots* ; Lyell's *Fancy Pigeons* (1881). Exchange for white Java Sparrows, Cockatiels, exhibition lutino Budgerigars, or offers (for part or lot).—W. Ferrier Brown, 85 Yew Tree Road, Southborough, Tunbridge Wells.

PROPERTY

Delightful holding of 2½ acres, easily kept. Mostly lawns and spring-fed ponds. Very suitable for waterfowl. Bungalow, large, pleasant rooms, central heating, £6,000.—Mrs. E. Wicks, Silver Springs, Beaufort Road, St. Leonards-on-Sea, Sussex.

EMPLOYMENT

Bachelor, age 24, five years' experience in large bird park, seeks another position. Please address letters : "V.-H.," c/o Hon. Secretary.

POST-MORTEM EXAMINATIONS

Attention is drawn to the following rules :—

1. All birds to be addressed to the Pathologist, Zoological Society of London, Regent's Park, London, N.W. 1.

2. A brief account of the illness should be sent and, in addition, it should be stated *what other birds are kept on the same premises.*

3. Enclose full name and address and telephone number, so that the owner may be informed urgently of what action to take in case of infectious disease, or contacted if further information is required.

4. Fees are based on the amount of work done. The basic fee for a single post-mortem examination is 10s., but bacteriological and other laboratory tests are charged extra. Where more than one bird is sent at the same time the fee is not necessarily as much as 10s. per bird.

5. No body or skin of any bird will be returned under any circumstances whatever.

Arthur A. Prestwich,
Hon. Secretary.

WATERFOWL RINGS

Members are reminded that the Society's special blue rings are always available. All Waterfowl in collections, both public and private, should carry them.

Revised prices

Size.		*Price per dozen, post free.* s. d.
2–3	Teal	4 0
3	Wigeon	4 9
4	Mallard, Pintail, etc.	5 6
4–5	Smaller geese	6 3
5	Greylag	7 0

Requests for rings should be addressed to the Hon. Secretary, Avicultural Society, c/o Zoological Society of London, Regent's Park, London, N.W. 1, from whom all particulars can be obtained.

Australian Parrots in Captivity

By Dr. ALAN LENDON

A reprint of a series of articles published in the AVICULTURAL MAGAZINE. A full account of 60 species of Australian Parrots is included in the book which deals where possible with the author's personal experiences in keeping them in captivity in South Australia. There are one coloured and seven photographic plates. Price 7s. 10d., post free.

Comparative Studies on the Behaviour of the Anatinae

By Dr. KONRAD LORENZ

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Studies on Great Crested Grebes

By K. E. L. SIMMONS

A paper, with illustrations by ROBERT GILLMOR, on the behaviour of the Great Crested Grebe, reprinted from the AVICULTURAL MAGAZINE. Price 5*s*. 4*d*., post free.

Published by the Avicultural Society, and obtainable from the Hon. Secretary, 61 Chase Road, Oakwood, London, N. 14.

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